

# JVC

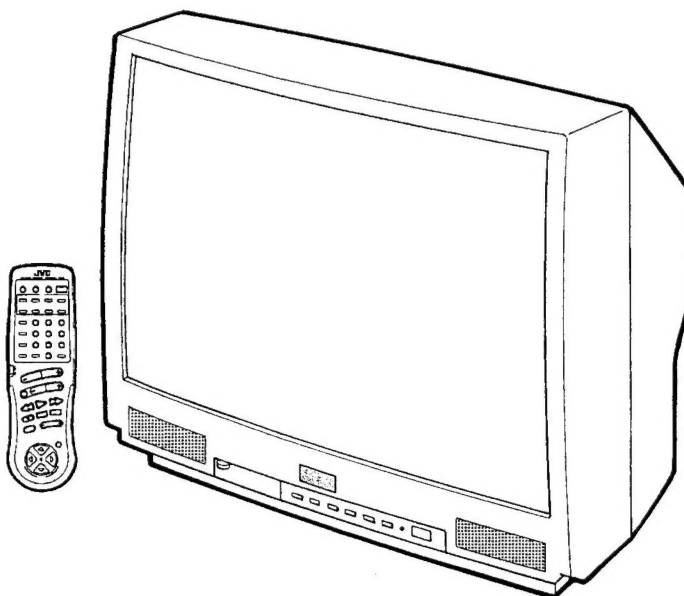
## SERVICE MANUAL

### COLOUR TELEVISION

BASIC CHASSIS

GB

## AV-T3885(BR)



## CONTENTS

|   |     |
|---|-----|
| ■ SPECIFICATIONS .....                      | 2   |
| ■ SAFETY PRECAUTIONS .....                  | 3   |
| ■ FEATURES .....                            | 4   |
| ★ OPERATING INSTRUCTIONS .....              | 1-1 |
| ■ SPECIFIC SERVICE INSTRUCTIONS .....       | 5   |
| ■ SERVICE ADJUSTMENTS .....                 | 11  |
| ★ STANDARD CIRCUIT DIAGRAM (APPENDED) ..... | 2-1 |
| ■ PARTS LIST .....                          | 33  |

# SPECIFICATIONS

| Item   | Contents   |
|--|--|
| <b>Dimensions ( W × H × D )</b>  | 860mm × 765mm × 603mm<br>33-7/8" × 30-1/8" × 23-3/4"   |
| <b>Mass</b>  | 69.2 kg<br>152.3 lbs   |
| <b>Reception Format</b><br>TV RF System<br>Color System<br>Sound System                        | CCIR(M) & (N)<br>NTSC / PAL-M / PAL-N<br>BTSC (Multi Channel Sound)  |
| <b>Reception Range</b><br>(Receiving Channels and Frequency)<br>VL Band<br>VH Band<br>UHF Band | (02 ~ 06) 55.25MHz ~ 83.25MHz<br>(07 ~ 13) 175.25MHz ~ 211.25MHz<br>(14 ~ 69) 471.25MHz ~ 801.25MHz                  |
| <b>CATV Channels and Frequency</b>   | (55.25MHz ~ 801.25MHz)<br>Sub Mid, Mid, Super, Hyper and Ultra bands   |
| <b>Closed Caption System</b>   | C1, C2, F1, F2 Available   |
| <b>Intermediate Frequency</b><br>Video IF Carrier<br>Sound IF Carrier<br>Color Sub Carrier     | 45.75MHz<br>41.25MHz (4.5MHz)<br>NTSC : 3.579545MHz<br>PAL-M : 3.57561149MHz<br>PAL-N : 3.58205625MHz                |
| <b>Power Input</b><br><b>RATING</b><br><b>OPERATING</b><br><b>Power Consumption</b>            | AC 120~240V(50 / 60Hz)<br>AC 90~260V(50 / 60Hz)<br>145W ( Max. ), 105W (Avg.)  |
| <b>Picture Tube</b><br>Screen Size<br>High Voltage   | 38inch / 96.5cm , measured diagonally, Full square<br>32.0kV ±1.3kV ( at zero beam current )                         |
| <b>Surround System</b>   | Build in HYPER SURROUND  |
| <b>Audio Power Output</b>  | 5W + 5W  |
| <b>External Input ( 1, 2 )</b><br>Video Input<br>Audio Input                                   | (Front input terminal is bridge connected with Input 2 terminal)<br>1Vp-p, 75Ω<br>500mVrms ( -4dBs ), High impedance |
| <b>S-Video Input</b>   | Y : 1Vp-p positive, 75Ω ( Negative sync provided )<br>C : 0.286Vp-p ( burst signal ), 75Ω                            |
| <b>Audio Output</b>  | More than 0 to 1550mVrms ( +6dBs )<br>Low impedance ( 400 Hz when modulated 100% )                                   |
| <b>Speakers</b><br><b>Antenna Input Impedance</b>  | 8cm × 12cm Oval Type × 2<br>75Ω ( VHF/UHF ) Terminal, F-Type Connector   |
| <b>Remote Control Unit</b>   | RM-C735-1A (AA/R6/UM-3 dry battery × 2)  |

Design & specifications subject to change without notice



# SAFETY PRECAUTIONS

1. The design of this product contains special hardware, many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the products should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service manual. **Electrical components having such features are identified by shading on the schematics and by ( $\Delta$ ) on the parts list in Service manual.** The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list of Service manual may cause shock, fire, or other hazards.
4. **Don't short between the LIVE side ground and ISOLATED (NEUTRAL) side ground or EARTH side ground when repairing.**  
Some model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : ( $\perp$ ) side GND, the ISOLATED(NEUTRAL) : ( $\text{⏏}$ ) side GND and EARTH : ( $\oplus$ ) side GND. Don't short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or EARTH side GND and never measure with a measuring apparatus (oscilloscope etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND or EARTH side GND at the same time.  
If above note will not be kept, a fuse or any parts will be broken.
5. If any repair has been made to the chassis, it is recommended that the B1 setting should be checked or adjusted (See ADJUSTMENT OF B1 POWER SUPPLY).
6. The high voltage applied to the picture tube must conform with that specified in Service manual. Excessive high voltage can cause an increase in X-Ray emission, arcing and possible component damage, therefore operation under excessive high voltage conditions should be kept to a minimum, or should be prevented. If severe arcing occurs, remove the AC power immediately and determine the cause by visual inspection (incorrect installation, cracked or melted high voltage harness, poor soldering, etc.). To maintain the proper minimum level of soft X-Ray emission, components in the high voltage circuitry including the picture tube must be the exact replacements or alternatives approved by the manufacturer of the complete product.
7. Do not check high voltage by drawing an arc. Use a high voltage meter or a high voltage probe with a VTVM. Discharge the picture tube before attempting meter connection, by connecting a clip lead to the ground frame and connecting the other end of the lead through a 10k $\Omega$  2W resistor to the anode button.
8. When service is required, observe the original lead dress. Extra precaution should be given to assure correct lead dress in the high voltage circuit area. Where a short circuit has occurred, those components that indicate evidence of overheating should be replaced. Always use the manufacturer's replacement components.

## 9. Isolation Check

### (Safety for Electrical Shock Hazard)

After re-assembling the product, always perform an isolation check on the exposed metal parts of the cabinet (antenna terminals, video/audio input and output terminals, Control knobs, metal cabinet, screw heads, earphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.

### (1) Dielectric Strength Test

The isolation between the AC primary circuit and all metal parts exposed to the user, particularly any exposed metal part having a return path to the chassis should withstand a voltage of 1100V AC (r.m.s.) for a period of one second.

(. . . Withstand a voltage of 1100V AC (r.m.s.) to an appliance rated up to 120V, and 3000V AC (r.m.s.) to an appliance rated 200V or more, for a period of one second.)

This method of test requires a test equipment not generally found in the service trade.

### (2) Leakage Current Check

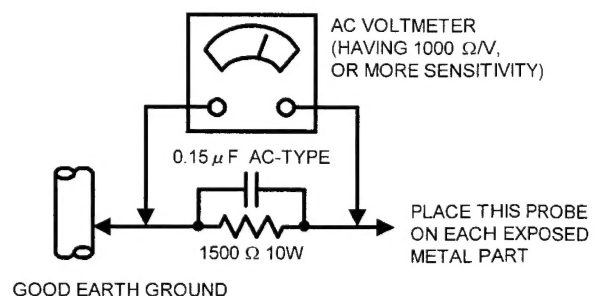
Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground (water pipe, etc.). Any leakage current must not exceed 0.5mA AC (r.m.s.).

However, in tropical area, this must not exceed 0.2mA AC (r.m.s.).

#### ● Alternate Check Method

Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Use an AC voltmeter having 1000 ohms per volt or more sensitivity in the following manner. Connect a 1500 $\Omega$  10W resistor paralleled by a 0.15 $\mu$ F AC-type capacitor between an exposed metal part and a known good earth ground (water pipe, etc.). Measure the AC voltage across the resistor with the AC voltmeter. Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75V AC (r.m.s.). This corresponds to 0.5mA AC (r.m.s.).

However, in tropical area, this must not exceed 0.3V AC (r.m.s.). This corresponds to 0.2mA AC (r.m.s.).



# FEATURES

- New chassis design enables use of interactive on-screen control.
- Comb filter improved picture quality.
- Full-square CRT reproduces fine textured picture in every detail.
- Wide range voltage AC power input.
- TELETEXT broadcast can be viewed.
- With AUDIO, VIDEO input terminal.
- By the sound multiplex broadcast with MTS system, you can enjoy music programs and sporting events with live realism.
- S-VIDEO input terminal for taking best advantage of Super VHS.
- Variable audio output terminal.
- I<sup>2</sup>C bus control utilities single chip ICs.
- By selecting the THEATER STATUS picture, you can enjoy pictures with powerful effects.
- Muting button can reduce the audio level to zero instantly.

# JVC

## Manual de Instruções

**Modelos:**

**AV-T3885 AV-T3487**

Leia o Manual de Instruções. Desta forma, você estará assegurando uma operação segura e livre de erros.

### PRECAUÇÕES IMPORTANTES DE SEGURANÇA



**AVISO**  
**RISCO DE CHOQUE.**  
**NÃO ABRA.**



**PRECAUÇÃO:** Para evitar o risco de choque não remova o gabinete do televisor. No interior do aparelho não existem peças que o consumidor possa trocar. Solicite sempre o Serviço Autorizado JVC.



O símbolo da flecha em forma de raio dentro do triângulo significa que as pessoas devem ficar alertas para o perigo da alta voltagem ao redor da região onde está aplicado esta etiqueta.



O ponto de exclamação dentro do triângulo significa que são peças importantes e que devem ser substituídas apenas por peças originais. Dentro do manual de manutenção existe literatura informando o procedimento de como manusear tais peças.

**ATENÇÃO:** PARA PREVENIR O RISCO DE INCÊNDIO OU CHOQUE, NÃO EXPONHA O APARELHO À CHUVA OU UMIDADE.

**AVISO:** AS RECOMENDAÇÕES ABAIXO DEVERÃO SER OBSERVADAS PARA A SUA SEGURANÇA E A DE SEU PRODUTO.

1. Opere o televisor somente com a alimentação especificada.
2. Evite danos no plugue e no cabo de força do televisor.
3. Evite fazer instalação incorreta e nunca coloque o televisor em lugares com pouca ventilação.
4. Não permita o derramamento de líquidos ou de objetos metálicos no interior do aparelho.
5. No caso de ocorrer alguma falha, desligue o televisor da tomada da rede elétrica e solicite o Serviço Autorizado JVC.

As alterações ou modificações realizadas por pessoas não credenciadas pela JVC do Brasil invalidam a garantia do seu televisor.

\* Quando o televisor não for utilizado por um longo período, retire o cabo de força da tomada da rede elétrica, a antena e as pilhas do controle remoto. Tal procedimento poderá evitar danos ao seu equipamento.

# JVC

VICTOR COMPANY OF JAPAN, LIMITED



LCT0646-001A-A  
0999-VP-TN-JIM

## CONEXÕES

|  |   |
|--|---|
| Verificação das Conexões . . . . .               | 3 |
| Tomadas dos Painéis frontal e traseiro . . . . . | 3 |
| Conexões do Sinal de Cabo e de VCR . . . . .     | 4 |
| Conexão com uma Câmera de Vídeo . . . . .        | 5 |
| Conexão com aparelhos S-VHS . . . . .            | 6 |
| Conexão com um Amplificador Externo . . . . .    | 6 |

## PREPARAÇÃO INICIAL

|                              |   |
|------------------------------|---|
| Controle Remoto . . . . .    | 7 |
| Tecla POWER . . . . .        | 8 |
| Ajustando o Volume . . . . . | 8 |
| Mudando os Canais . . . . .  | 8 |

## FUNÇÕES DO MENU

|  |    |
|--|----|
| Utilizando o MENU . . . . .                                | 9  |
| Ajustes Iniciais   |    |
| Alto-falantes do TV . . . . .                              | 10 |
| Idioma do MENU . . . . .                                   | 10 |
| Closed Caption . . . . .                                   | 10 |
| Programação Automática de Canais . . . . .                 | 10 |
| Resumo de Canais . . . . .                                 | 11 |
| Modo de Recepção . . . . .                                 | 12 |
| Ajustes de Imagem  |    |
| Matiz . . . . .  | 13 |
| Cor . . . . .  | 13 |
| Contraste . . . . .  | 13 |
| Brilho . . . . .   | 13 |
| Nitidez . . . . .  | 13 |
| Filtro Notch . . . . .                                     | 13 |
| Tela Azul . . . . .  | 13 |
| Status de Vídeo . . . . .                                  | 13 |
| Ajustes de Som   |    |
| Graves . . . . .   | 14 |
| Agudos . . . . .   | 14 |
| Balanço . . . . .  | 14 |
| MTS (Som estéreo multi canal) . . . . .                    | 14 |
| Algumas Informações sobre o Som Recebido pela TV . . . . . | 14 |
| Itens Gerais   |    |
| Ajuste do Relógio . . . . .                                | 15 |
| Timer ON/OFF . . . . .                                     | 15 |
| Para Programar a Senha . . . . .                           | 15 |

## FUNÇÕES DAS TECLAS

|  |    |
|--|----|
| Tecla Display . . . . .                | 16 |
| Tecla Closed Caption . . . . .         | 16 |
| Tecla Video Status . . . . .           | 16 |
| Tecla Sleep Timer . . . . .            | 16 |
| Tecla Color System . . . . .           | 16 |
| Tecla Hyper Surround . . . . .         | 17 |
| Tecla TV/Video . . . . .               | 17 |
| Tecla 100+ . . . . .                   | 17 |
| Teclas destinadas para o VCR . . . . . | 17 |
| Teclas Menu . . . . .                  | 17 |
| Tecla Mute . . . . .                   | 17 |
| Tecla Return + . . . . .               | 17 |
| Teclado Numérico . . . . .             | 17 |
| PIP (Picture in Picture) . . . . .     | 18 |
| Tecla Channel +/- (PIP) . . . . .      | 18 |
| Tecla Source . . . . .                 | 18 |
| Tecla Freeze . . . . .                 | 18 |
| Tecla Swap . . . . .                   | 18 |
| Tecla Move . . . . .                   | 18 |
| Tecla Color System (PIP) . . . . .     | 18 |

## PROGRAMANDO O CONTROLE REMOTO

|   |    |
|---|----|
| Programando o Controle Remoto . . . . .         | 19 |
| Ajustando os canais (CATV) e Satélite . . . . . | 19 |
| Códigos de VCRs . . . . .                       | 20 |

## CORREÇÃO DE PROBLEMAS

|                                 |    |
|---------------------------------|----|
| Correção de Problemas . . . . . | 21 |
|---------------------------------|----|

## ESPECIFICAÇÕES TÉCNICAS

## INFORMAÇÕES SOBRE AS CONEXÕES

### LEIA AS INFORMAÇÕES ABAIXO ANTES DE EFETUAR AS CONEXÕES

- 1) Os diagramas das páginas 4, 5 e 6 estão dispostos separadamente, mostrando cada possibilidade de conexão.
- 2) Os cabos A/V são coloridos para facilitar a conexão nas tomadas de áudio e vídeo:

- o plugue amarelo é para a conexão de vídeo
- o plugue vermelho é para a conexão do canal direito (RIGHT) de áudio.
- o plugue branco é para a conexão do canal esquerdo (LEFT) de áudio (mono).

Plugue de entrada A/V



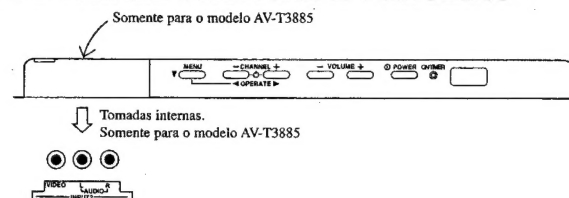
Conectores de RF



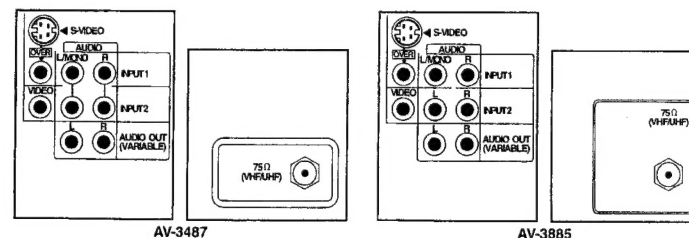
- 3) Para realizar as conexões com sucesso, certifique-se de que cada passo realizado está correto antes de prosseguir para a próxima conexão.
- 4) Certifique-se de desligar o cabo de força da tomada antes de efetuar as conexões.
- 5) Todas as tomadas da parte traseira da sua TV estão devidamente identificadas.

## DIAGRAMAS DO PAINEL FRONTAL E TRASEIRO

### Painel Frontal



### Painel Traseiro

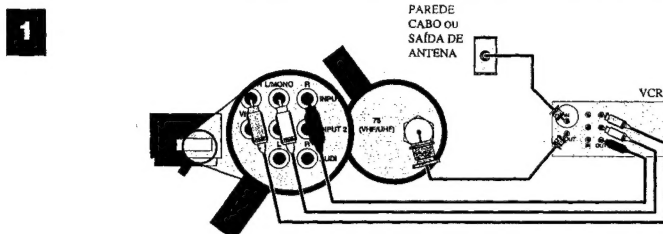


## 4 CONEXÕES

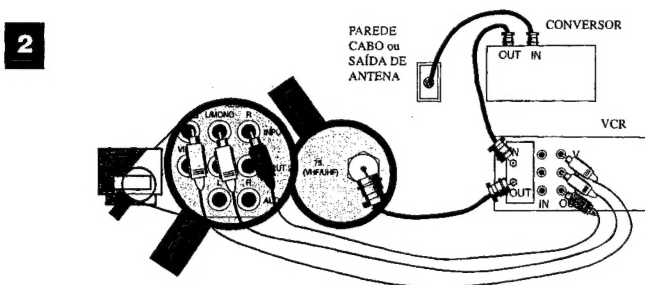
### CONEXÕES DE TV A CABO E VCR

Existem três formas básicas para se ligar a antena ou cabo. Se você possui antena, ou um sistema de TV a cabo não é necessário a utilização de um conversor para sintonizar os canais. Utilize o **Diagrama 1**. Se você possui um sistema de TV a cabo e necessita de um conversor para sintonizar todos os canais ou alguns canais especiais (Paper View), utilize o **Diagrama 2**.

**NOTA:** Para obter o som estéreo a partir do VCR Hi-Fi, você deve conectá-lo à TV com os cabos de áudio e vídeo. Além disso, para obter excelente qualidade de imagem do VCR, utilize os cabos de áudio e vídeo. (Faça isso e você ficará muito satisfeito!)



- 1) A saída do fio da antena ou do cabo vai da parede para para a entrada (IN) do VCR (entrada de RF).
  - 2) A saída (OUT) de RF do VCR vai para a entrada de antena da TV (75Ω VHF/UHF).
  - 3) O cabo de vídeo amarelo vai na saída VIDEO OUT do VCR e na entrada VIDEO da TV.
  - 4) O cabo de áudio branco vai na saída AUDIO OUT L (esquerda) do VCR e na entrada INPUT 1 AUDIO L(MONO) da TV.
  - 5) O cabo de áudio vermelho vai na saída AUDIO OUT R (direita) do VCR e na entrada INPUT 1 AUDIO R da TV.
- Se o seu VCR é mono, ele possui apenas uma tomada de saída de áudio. Conecte-a na tomada INPUT 1 AUDIO L/MONO da TV.

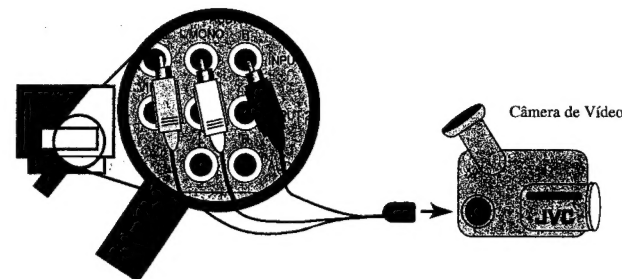


- 1) A saída do cabo vai da parede para a entrada IN do conversor.
  - 2) A saída (OUT) do conversor vai para a entrada (IN) de RF do VCR.
  - 3) A saída (OUT) de RF do VCR vai para a entrada de antena da TV (75Ω VHF/UHF).
  - 4) O cabo de vídeo amarelo vai na saída VIDEO OUT do VCR e na entrada VIDEO da TV.
  - 5) O cabo de áudio branco vai na saída AUDIO OUT L (esquerda) do VCR e na entrada INPUT 1 AUDIO L(MONO) da TV.
  - 6) O cabo de áudio vermelho vai na saída AUDIO OUT R (direita) do VCR e na entrada INPUT 1 AUDIO R da TV.
- Se o seu VCR é mono ele possui apenas uma tomada de saída de áudio. Conecte-a na tomada INPUT 1 AUDIO L/MONO da TV.

## CONEXÕES

## 5

### CONEXÃO DE UMA CÂMERA DE VÍDEO



#### ATENÇÃO:

Se você possui o modelo AV-T3885, a câmera poderá ser ligada nas tomadas do painel frontal da TV. As tomadas frontais permitem maior comodidade para ligar e desligar aparelhos que são utilizados esporadicamente. Quando estas tomadas estão sendo utilizadas, as tomadas traseiras INPUT 2 ficam inoperantes.

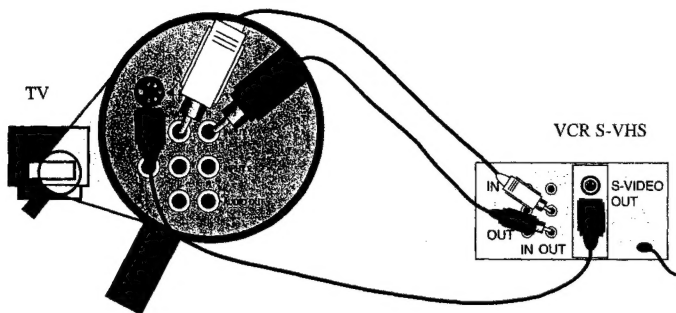
Conecte a Câmera de Vídeo na sua TV.

- 1) O cabo de áudio branco vai da câmera para a entrada INPUT AUDIO L/MONO da TV.
- 2) O cabo de vídeo amarelo vai da câmera para a entrada INPUT VIDEO da TV.
- 3) Se você possui uma câmera estéreo, ligue o cabo de áudio vermelho que sai da câmera na entrada INPUT AUDIO R da TV.

□ Para informações mais detalhadas, consulte o manual de instruções da câmera.



## CONEXÃO DE UM APARELHO COM TOMADA S-VIDEO

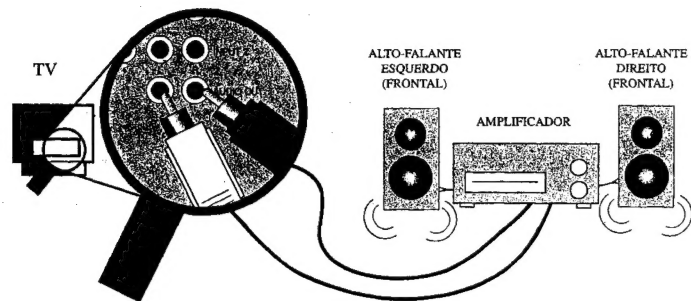


As conexões de áudio são iguais às das descritas na página 5. A conexão acima refere-se a um VCR Super VHS. O cabo especial é fornecido com o VCR.

1) O cabo S-VHS vai da saída S-VIDEO OUT do VCR para a entrada S-VIDEO da TV.

□ Para informações mais detalhadas, consulte o manual de instruções do produto.

## CONEXÃO COM UM AMPLIFICADOR EXTERNO



Desligue os falantes da TV (veja a página 10) e utilize a tecla VOLUME +/- para controlar o nível de volume (veja a página 8).

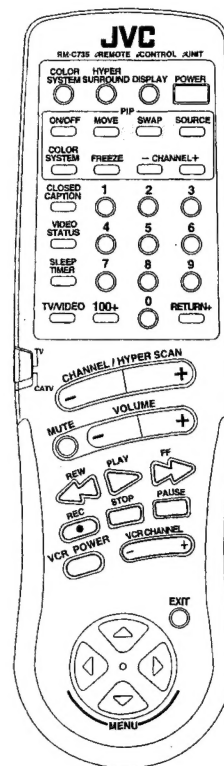
1) O cabo de áudio branco vai na saída AUDIO OUT L (esquerda) da TV e na entrada INPUT do amplificador.

2) O cabo de áudio vermelho vai na saída AUDIO OUT R (direita) da TV e na entrada INPUT do amplificador.

□ Para informações mais detalhadas, consulte o manual de instruções do amplificador.



## CONTROLE REMOTO

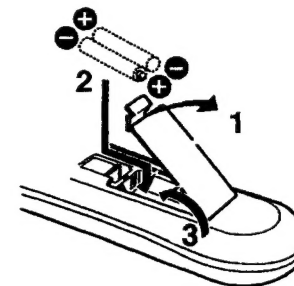


RM-C735

## Para Substituir e Inserir as pilhas.

Utilize somente pilhas tipo AAA.

- 1 Pressione a trava e levante a tampa do controle remoto.
- 2 Insira duas pilhas tipo AAA respeitando a polaridade "+" e "-" indicada no controle remoto. Para evitar pequenos curto-circuitos no controle, insira primeiro o pólo negativo "-" da pilha.
- 3 Feche a tampa. A tampa do controle estará totalmente fechada quando for ouvido um "click".



## NOTAS:

- Uma vez colocadas as pilhas no controle remoto e confirmado que ele está funcionando, você poderá programá-lo para poder operar um VCR de outra marca ou ainda um receptor de satélite ou cabo. Veja as páginas 19 e 20.
- Se o tempo para a troca das pilhas for maior que um minuto, poderá ser necessário a reprogramação dos canais a cabo e do código do VCR. Veja a página 19.
- Se o controle remoto não responder corretamente aos comandos, substitua as pilhas. A vida útil de uma pilha é normalmente entre 6 meses e um ano, dependendo da intensidade de uso.
- É recomendado a utilização de pilhas alcalinas.





## 8 PREPARAÇÃO INICIAL

### PARA LIGAR A TV

- ☐ Posicione a chave TV/ CATV para TV. Posicione para CATV somente se a recepção de canais for por TV a Cabo.
- ☐ Pressione POWER (⏻) do painel frontal da TV. O indicador luminoso ON TIMER se acende na cor vermelha.
- ☐ Para desligar a TV, pressione POWER (⏻) no controle remoto. O indicador ON TIMER permanece aceso.
- ☐ Quando a TV não for utilizada por um longo período (férias por exemplo), desligue-a pela tecla Power do painel frontal. O indicador luminoso ON TIMER se apaga.
- ☐ Existem duas maneiras para ligar a TV quando ela é desligada pela tecla Power do controle remoto:
  - 1) Pressione a tecla POWER do controle remoto.
  - 2) Pressione a tecla CHANNEL - /+ do painel frontal da TV.
- ☐ Quando a função ON TIMER está programada, o indicador luminoso ON TIMER se acende na cor verde. Quando a TV é desligada pela tecla POWER do controle remoto e a função TIMER está ativa, o indicador luminoso permanece aceso na cor verde. Veja como programar o Timer na página 15.

#### NOTA:

- Para ligar a TV usando o controle remoto, ela deve estar no modo standby.

### AJUSTE DO VOLUME

- 1 Pressione a tecla VOLUME no painel frontal ou no controle remoto.



- 2 Pressione a tecla MUTE para silenciar o volume.  
Para retornar a audição normal, pressione novamente a tecla MUTE.

### MUDANDO OS CANAIS

- 1 Acesso direto pelo teclado numérico.

Para canais de um dígito, pressione primeiro 0 e depois o número desejado;  
Para canais acima de 100, pressione a tecla +100 e depois os dois dígitos desejados.

- 2 Tecla CHANNEL/HYPER SCAN .

Esta tecla tem dois estágios. É possível sentir um ligeiro "click" entre os estágios.

#### Para mudar os canais normalmente - tecla CHANNEL +/-

Cada vez que a tecla CHANNEL/HYPER SCAN é pressionada levemente (primeiro estágio), o canal seguinte será exibido (-) abaixo ou (+) acima do atual. Mantendo-se esta tecla levemente pressionada (ainda no primeiro estágio) os canais são exibidos seqüencialmente.

#### Para mudar os canais rapidamente - tecla HYPER SCAN +/-

Ao pressionar fortemente a tecla CHANNEL/HYPER SCAN (segundo estágio), os canais serão exibidos rapidamente. Um canal não será selecionado até que a tecla seja solta.

#### NOTAS:

- Apenas os canais programados podem ser selecionados (consulte a página 11).
- A função HYPER SCAN está disponível apenas pelo controle remoto.

## UTILIZANDO O MENU 9



### SÍMBOLOS UTILIZADOS NESTE GUIA:

▲▼ As setas para cima (▲) e para baixo (▼) permitem rolar verticalmente as listas de funções dos menus principais e dos itens dentro de cada menu principal.

◀▶ As setas para a esquerda (◀) e para a direita (▶) permitem atenuar ou realçar o ajuste selecionado, ou ligar e desligar a função selecionada.



O desenho ao lado "pressionando a tecla" significa que você deve pressionar a tecla do controle remoto.

- ☐ A seguir serão apresentadas informações importantes sobre as características da TV.

Os nomes das teclas são sempre escritos com letras maiúsculas (MENU) para não provocarem confusão com as funções do menu que possuem o mesmo nome.

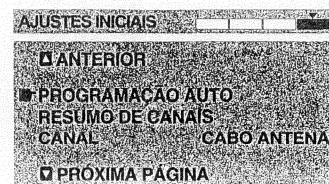
### APRENDENDO AS TELAS DO MENU:

Para utilizar o menu, pressione uma das quatro teclas do MENU para ver na tela da sua TV JVC os ajustes possíveis. O item que aparece na cor amarela está selecionado para o ajuste.

Geralmente os ajustes começam com o menu de imagem. Entretanto, é importante que sejam iniciados conforme apresentado abaixo.

- ☐ Se você utilizar a tecla Menu do painel frontal da TV, as indicações do número do canal e da função TV/VIDEO aparecem antes da tela dos ajustes de imagem.

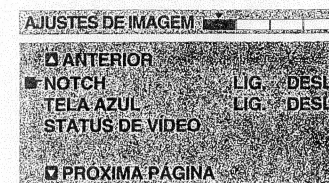
#### AJUSTES INICIAIS



#### AJUSTES DE IMAGEM



#### AJUSTES DE IMAGEM



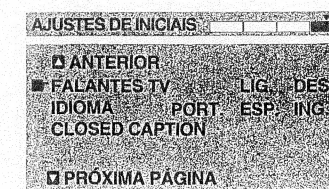
#### AJUSTES DE SOM



#### AJUSTES GERAIS



#### AJUSTES INICIAIS



**NOTA:**  
Quando o sistema PAL-N está selecionado, a função Closed Caption não atua.

## ALTO-FALANTES DA TV

Você pode ouvir o som dos alto-falantes da TV, ou se desejar, das caixas acústicas do equipamento estéreo. Neste caso, desligue os alto-falantes da TV.

- ▲▼ Para o item FALANTES TV no menu
- ◀▶ Para ligar ou desligar

FALANTES TV    LIG    DESL



Pressione EXIT quando terminar

**Nota:** Antes de ligar novamente os falantes da TV, certifique-se de que o controle VOLUME está no mínimo.

## IDIOMA

Escolha o idioma desejado (Português, Espanhol ou Inglês).

- ▲▼ Para localizar o item IDIOMA no menu
- ◀▶ Para ativar

IDIOMA    PORT    ESP    ING

↑Português→Espanhol→Inglês



Pressione EXIT quando terminar

## CLOSED CAPTION

Quando incluídos no programa, você pode ver as informações do Closed Caption ou texto.

- ▲▼ Para localizar CLOSED CAPTION no menu
- ◀▶ Para localizar e selecionar "captions" (legendas) ou canal de texto.

CAPTION    CC1    CC2    CC3    CC4  
TEXTO    T1    T2    T3    T4  
TERMINAR

- ▲▼ Para FINALIZAR
- ◀▶ Para salvar os ajustes



Pressione EXIT quando terminar

## Informações sobre o Closed Caption

Se o programa de TV, videocassete ou fita videocassete que você estiver assistindo for identificada na apresentação ou na embalagem pelas palavras Closed Caption, isto significa a presença de legendas codificadas no idioma original. A sua TV JCV tem um decodificador que permite ver essas legendas, o que pode facilitar bastante a compreensão dos diálogos nos programas sem legendas em português ou não dublados.



Para ver essas legendas, aperte repetidamente a tecla CLOSED CAPTION. Observe as indicações abaixo:

**CLOSED CAPTION** - para ver as legendas.  
**TEXTO** - para ver teletexto.  
**DESLIGADO** - para desligar o decodificador de legendas e teletexto.

- Notas:**
- As legendas são normalmente encontradas em CC1 e o texto em T1, CC2, CC3, CC4, T2, T3, e T4 estão reservados para projetos futuros.
  - A função COLSED CAPTION não pode ser acionada no sistema PAL-N.
  - Se um boxe largo e preto aparecer na tela da TV, é provável que o modo texto esteja ativo. Pressione a tecla CLOSED CAPTION para desativar.
  - As legendas do CLOSED CAPTION poderão não aparecer corretamente se a recepção do canal sintonizado não estiver boa.
  - As legendas CLOSED CAPTION poderão apresentar problemas nas transmissões de TV a cabo ou nas fontes de vídeo com proteção contra cópias (copy guard).

## PROGRAMAÇÃO AUTOMÁTICA

Durante o processo de sintonização automática, a TV procura e memoriza os canais ativos e com sinal forte de sua região. Os canais com sinal fraco e ruidosos naquele momento não são memorizados.

- ▲▼ Para selecionar PROGRAMAÇÃO AUTO no menu
- ◀▶ Para ATIVAR

PROGRAMANDO...  
▶▶▶ ◻ ▶▶▶  
05

O processo de programação dura de 3 a 4 minutos, aproximadamente.

FIM DA PROGRAMAÇÃO

- Notas:**
- O redutor de ruído não atua durante a programação automática.
  - Você poderá incluir canais que não foram memorizados e deletar aqueles que você não deseja sintonizar pelas teclas CHANNEL. Veja o item Resumo de Canais, abaixo.

## RESUMO DE CANAIS

Você pode adicionar ou deletar canais com a função Resumo de Canais. Além disso, você pode também censurar canais que julgar inapropriados, a partir do 1 ou todos os 181 canais.

- ▲▼ Para localizar RESUMO DE CANAIS
- ◀▶ Para operar

## ADICIONAR

Você pode sintonizar manualmente os canais fracos e ruidosos que não foram programados durante a programação automática. Por outro lado, se você deseja deletar canais com boa recepção, basta remover o "X", conforme apresentado na tela abaixo.

| CAN | PROG | LOCK | CAN | PROG | LOCK |
|-----|------|------|-----|------|------|
|     |      |      | 06  | X    |      |
| 02  | X    |      | 07  |      |      |
| 03  | X    |      | 08  |      |      |
| 04  | X    |      | 09  | X    |      |
| 05  | X    |      | 10  | X    |      |



Utilize a tecla CHANNEL +/- para escolher o canal desejado

- ▲▼ Para movimentar o cursor pelas colunas
- ◀▶ Para incluir ou deletar



Pressione EXIT quando terminar





## AJUSTES INICIAIS

**Nota:** Os canais identificados com um "X" podem ser sintonizados pela tecla CHANNEL +/-.

**Nota:** Alguns sistemas de cabo quando sintonizam o canal 95, provocam interferências nas frequências de rádio. Se você desejar, delete este canal removendo o "X" do número 95.

### Censurar Canais

▲ ▼ Para selecionar o item RESUMO DE CANAIS no menu

◀ ▶ Para operar

▲ ▼ Para selecionar o ícone do cadeado.

| CAN | PROG | LOCK | CAN | PROG | LOCK |
|-----|------|------|-----|------|------|
| 01  | X    |      | 06  | X    |      |
| 02  | X    |      | 07  |      | LOCK |
| 03  | X    |      | 08  |      | LOCK |
| 04  | X    |      | 09  | X    |      |
| 05  | X    |      | 10  | X    |      |



Pressione o dígito zero (0) para bloquear ou desbloquear o canal.

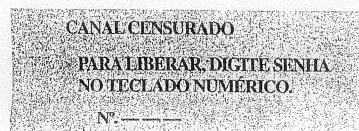
Utilize a tecla CHANNEL +/- para selecionar outro canal que você deseja bloquear



Pressione Exit quando terminar

### MENSAGEM DE CANAL CENSURADO:

A mensagem abaixo aparece quando um canal censurado é sintonizado:



Continuação ...

Digite a senha para liberar o canal. Se a senha estiver errada, a seguinte mensagem aparecerá:



### Notas:

Existem duas seções no item Resumo de Canais.

Para mover a coluna para cima e para baixo (canal por canal), utilize a tecla CHANNEL +/-.

Para mudar item a item (número do canal, adicionar ou censurar), utilize as teclas com as setas para cima e para baixo.

A função Tela Azul não funciona durante a operação do item Resumo de Canais.

### MODO DE RECEPÇÃO

Para selecionar o sistema de recepção entre ANTENA ou CABO.

▲ ▼ Para selecionar o item CANAL no menu

◀ ▶ Para operar



Pressione Exit quando terminar

**Nota:** Veja como ligar o sistema de cabo nas páginas 4 e 5.



## AJUSTES DE IMAGEM

### NOTA:

O ajuste de imagem selecionado fica na cor amarela.

### MATIZ

O ajuste da MATIZ aparece somente nas transmissões de programas NTSC.

▲ ▼ Para selecionar o item MATIZ

▶ Para acentuar o verde

◀ Para acentuar o vermelho

▲ ▼ Para mover para o próximo item

### COR

Ajuste para deixar as cores mais vivas ou para suavizá-las.

▲ ▼ Para selecionar o item COR

▶ Para deixar as cores mais vivas

◀ Para suavizar as cores

▲ ▼ Para mover para o próximo item

### CONTRASTE

Permite variar o ajuste da faixa de contraste para preto e branco.

▲ ▼ Para selecionar o item CONTRASTE

▶ Para aumentar o contraste

◀ Para diminuir o contraste

▲ ▼ Para mover para o próximo item

### BRILHO

Ajusta o grau de escuro e claro.

▲ ▼ Para selecionar o item BRILHO

▶ Para clarear a imagem

◀ Para escurecer a imagem

▲ ▼ Para mover para o próximo item

### NITIDEZ

Ajusta o nível de detalhe da imagem.

▲ ▼ Para selecionar o item NITIDEZ

▶ Para acentuar a imagem

◀ Para suavizar a imagem

▲ ▼ Para mover para o próximo item

### FILTRO NOTCH

Atua na transição de uma imagem em cores vivas com um fundo claro, como noticiários e programas com legenda por exemplo.

▲ ▼ Para selecionar o item NOTCH

◀ ▶ Para ligar ou desligar

### TELA AZUL

Introduz uma tela azul e elimina a tela com chuviscos provenientes de canais vazios ou de canais com sinal fraco.

▲ ▼ Para selecionar o item TELA AZUL

◀ ▶ Para ligar ou desligar

**Nota:** O recurso Tela Azul não funciona durante a Programação Automática de canais e Resumo de Canais.

### STATUS DE VÍDEO

Para memorizar os ajustes de imagem de sua preferência.

▲ ▼ Para selecionar o item STATUS DE VIDEO

◀ ▶ Para operar



◀ ▶ Para selecionar o item MATIZ

▲ ▼ Para mover para o próximo item

Repita estes passos até ajustar todas as opções.

▲ ▼ Para memorizar o ajuste de sua preferência, mover o cursor até "Memorizar Ajustes"

◀ ▶ Para memorizar o ajuste e sair

OBRIGADO !!

**Nota:** Para acessar estes ajustes, basta pressionar VIDEO STATUS no controle remoto até a mensagem "Personalizado" aparecer na tela.



## AJUSTES DE SOM

### NOTA:

O item selecionado fica na cor amarela.

### GRAVES

- ▲ ▼ Para selecionar GRAVES
- Para acentuar os graves
- ◄ Para reduzir os graves
- ▲ ▼ Para mover para o próximo item

### AGUDOS

- ▲ ▼ Para selecionar AGUDOS
- Para acentuar os agudos
- ◄ Para reduzir os agudos
- ▲ ▼ Para mover para o próximo item

### BALANÇO

- ▲ ▼ Para selecionar BALANÇO
- Para aumentar o som do alto-falante do lado direito
- ◄ Para aumentar o som do alto-falante do lado esquerdo
- ▲ ▼ Para mover para o próximo item

### Algumas informações a respeito do áudio recebido pela TV

Você pode notar se a transmissão do programa é em estéreo pela indicação da seta ON AIR no menu MTS. Infelizmente, nem sempre isso é verdade, ou seja, algumas companhias de cabo transmitem programas mono com o sinal piloto em estéreo. Isto ocorre porque estas companhias não possuem equipamento mono. Se conectado a um sistema de cabo, a recepção do som fica a mercê da companhia de cabo — se eles transmitem o sinal em mono, você recebe o som mono indiferente se a programação original é estéreo.

Felizmente, a maioria das transmissões em estéreo pelas redes de televisão são pelo ar (via antena).

Se o seu TV está ligado a um sistema de cabo e você deseja mudar para ANTENA (página 12), tal mudança tornará possível receber as transmissões em estéreo.

### MTS (Multi-Channel Television Sound)

A tecnologia MTS permite escolher entre os sistemas estéreo, mono ou SAP (segundo programa de áudio).

- ▲ ▼ Para selecionar MTS



- ◄ ► Para selecionar o modo

(A indicação no ar com a seta indica que o sinal está sendo transmitido em estéreo ou SAP.)

**Nota:** Para obter a melhor reprodução do som, selecione a opção estéreo.

**Nota:** O SAP permitirá a você ouvir o som do idioma original, caso esteja disponível.

**Nota:** Selecione a opção mono para reduzir o excesso de ruído no som de um programa ou de um canal.

### AJUSTE DO RELÓGIO

O relógio deve estar funcionando para poder programar o timer.

- ▲ ▼ Para selecionar o item RELÓGIO/TIMER no menu
- ◄ ► Para operar



- ◄ ► Para ajustar a hora (AM/PM)
- ▼ Para mover para os minutos

- ◄ ► Para ajustar os minutos
- ▼ Para finalizar o ajuste
- ◄ ► Para iniciar o funcionamento do relógio

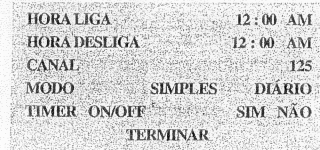
**OBRIGADO!!**

**Nota:** Se a TV é desligada da tomada ou se faltar energia elétrica, o relógio deverá ser novamente ajustado para que as funções do timer possam funcionar.

### TIMER ON/OFF

Com esta função é possível ligar e desligar a TV num horário pré-determinado. Utilize-a para despertar, para ligar a TV e assistir um determinado programa ou para simular a presença de pessoas na residência quando você estiver fora.

- ▲ ▼ Para selecionar o item TIMER ON/OFF no menu
- ◄ ► Para operar



- ◄ ► Para ajustar a hora (AM/PM)
- ▼ Para mover para os minutos
- ◄ ► Para ajustar os minutos

## ITENS GERAIS



- ▼ Para selecionar HORA LIGA e HORA DESLIGA
- ▼ Para mover para o item CANAL
- ◄ ► Para selecionar o canal
- ▼ Para selecionar o MODO
- ◄ ► Para selecionar SIMPLES ou DIÁRIO
- ▼ Para selecionar SIM ou NÃO
- ◄ ► Selecione SIM para ativar
- Selecione NÃO para desativar
- ▼ Para finalizar
- ◄ ► Para memorizar e sair do ajuste

**OBRIGADO!!**

**Nota:** A função Timer só atua se o relógio estiver funcionando. Se faltar energia, a programação do timer poderá ser cancelada.

**Nota:** O timer não funciona para os canais censurados.

### PARA PROGRAMAR A SENHA

Esta senha permite a você bloquear e desbloquear canais censurados. Digite três números e não os deixe à vista das pessoas de sua casa.

- ▲ ▼ Para selecionar o item PROGRAMAR SENHA no menu
- ◄ ► Para operar

O ícone do cadeado aparece



Pressione o dígito zero (0)



- ▲ ▼ Para localizar o primeiro dígito da senha.
- ◄ ► Para escolher o número
- ▲ ▼ Para mover para o próximo dígito

Repita esta operação até ter digitado os três números da senha

- ▲ ▼ Para finalizar
- ◄ ► Para memorizar e sair do ajuste

**OBRIGADO!!**

**Notas:** Se você esquecer o código, repita a operação acima para programar outro. Se a energia elétrica for interrompida, a senha deverá ser reprogramada.





## FUNÇÕES DAS TECLAS

### NOTAS:

Se o relógio, Timer ON/OFF e o Sleep Timer não estiverem ajustados, ao pressionar a tecla Display não aparecerá na tela as indicações destas funções

### CLOSED CAPTION:

Quando o sistema de cores está ajustado para PAL-N, a função CLOSED CAPTION não atua.

### TECLA DISPLAY

Permite visualizar o canal sintonizado, hora e programação dos timers.



Tecla DISPLAY

|              |          |
|--------------|----------|
| 07           | 12:20 AM |
| AGORA        | DESL.    |
| SLEEP TIMER  | DIÁRIO   |
| TIMER ON/OFF | 12:00 PM |
| LIGAR        | 10:00 PM |
| DESLIGAR     |          |

- ☐ Canal ou entrada AV (Canal 07)
- ☐ Horário (12:20 PM)
- ☐ Tempo remanescente do Sleep Timer.
- ☐ Timer ON/OFF diário (ligar às 12:00 PM e desligar às 10:00 PM)
- ☐ Cada vez que a tecla DISPLAY é pressionada, as indicações mudam na seguinte ordem:

→ Display → Hora → Canal → Desl. →

### TECLA CLOSED CAPTION

Para ver as legendas ou texto é necessário que eles estejam incluídos no programa.



Tecla CLOSED CAPTION

→ Closed Caption → Texto → Desl. →

Maiores informações na página 10.

### TECLA VIDEO STATUS

Permite selecionar os ajustes conforme relacionado abaixo.

“NORMAL” ajusta a imagem conforme padrão de fábrica.

“PERSONALIZADO” ajustes memorizados por você. (Página 13.)

“THEATER” para assistir programas em um ambiente escuro.



→ NORMAL → PERSON. → THEATER →

### TECLA SLEEP TIMER

A sua TV pode ser programada para se desligar num tempo determinado. A programação pode ser feita em intervalos de 15 minutos até 180 minutos.



Tecla SLEEP TIMER

0 15 30 45 60 75 90 105 120 135 150 165 180

**MENSAGEM ANTES DO DESLIGAMENTO:**  
20 segundos antes do desligamento a mensagem abaixo aparece na tela: Você tem 20 segundos para prorrogar este tempo, pressionando a tecla SLEEP TIMER e retardar o desligamento por mais 15 minutos.

**BOA NOITE !!**  
**PARA AUMENTAR TEMPO.**  
**APRTE SLEEP TIMER.**

### TECLA COLOR SYSTEM

Seleciona automaticamente o sistema de cores. Porém, se as cores não aparecerem, selecione manualmente.



Tecla COLOR SYSTEM

→ AUTO → PAL-M → PAL-N → NTSC →

## FUNÇÕES DAS TECLAS



### TECLA HYPER SURROUND

Cria uma profundidade no som, proporcionando um efeito tridimensional através dos alto-falantes frontais.

### TECLA TV / VIDEO

Seleciona o modo de entrada.



TV/VIDEO

→ TV → VIDEO-1 → VIDEO-2 →

### TECLA 100 +

Utilize-a para acessar os canais acima de 99.

Para selecionar o canal 124:



100+



2 (dois)



4 (quatro)

### TECLAS DO VCR

Este controle remoto poderá controlar as teclas do seu VCR JVC. Para os VCRs de outros fabricantes é necessário habilitar o VCR através de um código. Veja a página 19.

### TECLAS MENU

As teclas do MENU permitem acessar todas as funções disponíveis do seu TV. Veja instruções mais detalhadas na página 9.

### TECLA MUTE

Permite silenciar completamente o volume da TV. Pressione-a novamente para retomar o volume normal.

### TECLA RETURN+

Existem duas possibilidades para a função Return:

**Return+ —** Permite memorizar um canal que você assiste com maior frequência. Para assisti-lo, basta pressionar a tecla RETURN+.

### Importante:

Este procedimento só funciona quando os canais são sintonizados pela tecla CHANNEL +/-.

Escolha um canal utilizando as teclas CHANNEL +/-



Mantenha pressionada a tecla RETURN+ por três segundos

**CANAL DE RETORNO PROGRAMADO!**



Não importa quantos canais você mudou pela tecla CHANNEL, pressionando a tecla RETURN+ o canal memorizado é sintonizado.

**Nota:** Para cancelar a função canal de retorno, mantenha a tecla RETURN+ pressionada por mais 3 segundos. Observe a indicação “Canal de Retorno Cancelado”.

**Return —** Para retornar ao último canal assistido.

### Importante:

Este procedimento funciona tanto pela tecla CHANNEL quanto para o teclado numérico.



Pressione RETURN+

**Nota:** O canal de retorno não funciona para a função PIP.

### TECLADO NUMÉRICO

Utilize-o para mudar os canais. Para sintonizar o canal 7 por exemplo:



0 (zero)



7 (sete)

### NOTA:

A função Return+ só funciona quando os canais são mudados pelas teclas CHANNEL +/-.

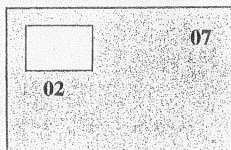
Quando o teclado numérico é utilizado para sintonizar um canal, esta função é cancelada.

## PIP (Picture in Picture)

Possibilita ver dois programas diferentes ao mesmo tempo, seja dois programas de TV ou um de TV e outro de vídeo.



Pressione a tecla PIP On/Off para ativar a função



Pressione a tecla PIP On/Off para desativar a função PIP.

**Nota:** A imagem do canal PIP e do canal principal poderão aparecer momentaneamente após o pressionamento da tecla PIP On/Off. Para deixar os canais PIP e principal aparentes, pressione 3 vezes a tecla DISPLAY.

**Nota:** O tamanho da tela PIP é 1/9 menor que a tela principal.

## TECLAS CHANNEL +/- do PIP

Para mudar os canais da tela PIP.



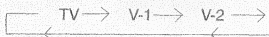
Pressione PIP CHANNEL +/-

## TECLA SOURCE

Para selecionar a fonte da imagem PIP.



Pressione a tecla SOURCE



Para ver as imagens das saídas V1 e V2 é necessário que sejam conectados equipamentos em suas respectivas tomadas. Veja as páginas 4 e 5.

• Você pode conectar um videocassete, videolaser ou câmera de vídeo às entradas INPUT 1 e INPUT 2.

## TECLA FREEZE

Você pode congelar a imagem da tela grande e mandá-la para dentro da tela pequena ou congelar a imagem PIP.



FREEZE

**Nota:** Quando o PIP está desligado, pressionando a tecla FREEZE a imagem da tela grande é congelada e instantaneamente capturada pela tela PIP (pequena).

**Nota:** Quando a tela PIP está selecionada e a tecla FREEZE é pressionada, a imagem fica paralisada.

## TECLA SWAP

Permite trocar a imagem da tela pequena pela imagem da tela grande.



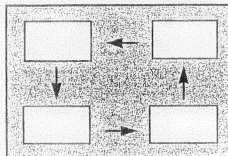
SWAP

## TECLA MOVE

Você pode movimentar a tela PIP conforme indicado na ilustração abaixo.



Pressione a tecla Move



**Nota:** Cada vez que você pressiona a tecla Move, a tela PIP muda de posição dentro da tela principal.

## TECLA COLOR SYSTEM (PIP)

Seleciona automaticamente o sistema de cores. Porém, se as cores não aparecerem, selecione manualmente.



Tecla COLOR SYSTEM



## AJUSTANDO OS CANAIS (CATV) E OS CÓDIGOS DE VCR

O controle remoto foi projetado para operar outras marcas de VCR's, sistema de TV a Cabo e receptores de satélite, conforme indicado na tabela abaixo. Se você seguiu as instruções descritas abaixo e conseguiu habilitar o seu sistema, desconsidere o texto da coluna direita.

## PARA AJUSTAR CATV/RECEPTOR DE SATÉLITE

1) Ajuste a chave CATV/TV para CATV.

2) Obtenha o código do seu produto conforme indicado na tabela abaixo.

3) Aponte o controle para o aparelho desejado e pressione simultaneamente as teclas TV POWER e RETURN+, e depois solte-as.

4) Utilize o teclado numérico para digitar o código de três dígitos. Em seguida, pressione a tecla RETURN+ (Se você não pressionar a tecla RETURN+ o ajuste não será realizado.)

• A tecla POWER, o teclado numérico e as teclas CHANNEL +/- podem controlar o seu aparelho.

Se você realizou as instruções descritas no lado esquerdo e se todas as tentativas de códigos foram realizadas e o aparelho não respondeu aos comandos do controle remoto, você deverá tentar habilitar o controle conforme descrito abaixo:

## FUNÇÃO BUSCA DE CÓDIGOS

1) Ajuste a chave CATV/TV para CATV.

2) Aponte o controle para o aparelho desejado e pressione ao mesmo tempo as teclas TV POWER e RETURN+, e depois solte-as.

3) Pressione a tecla TV/POWER e observe se o aparelho respondeu aos comandos do controle remoto.

4) Quando ele responder, pressione a tecla RETURN+. Se não obtiver resposta na primeira tentativa, repita o item 3 até obter resultado positivo. (Se você não pressionar a tecla RETURN+, o ajuste não será realizado.)

## NOTA:

• Conforme o tipo de VCR, pode haver casos em que alguma ou nenhuma função possa ser operada com o controle remoto.

## CÓDIGOS PARA TV A CABO E SATÉLITE

| CONVERSOR          | CÓDIGOS                     | CONVERSOR          | CÓDIGOS         | CONVERSOR      | CÓDIGOS             |
|--------------------|-----------------------------|--------------------|-----------------|----------------|---------------------|
| ABC                | 001 003 007 008 011 013 014 | Oak                | 007 019         | Tusa           | 015                 |
| Allegro            | 153 315                     | Panasonic          | 000 021 107     | TV86           | 063                 |
| Antronix           | 022 207                     | Panther            | 637             | Unika          | 022 153 207         |
| Archer             | 022 153 207                 | Paragon            | 000             | United Artists | 007                 |
| Belcor             | 056                         | Philips            | 025 027 031 153 | United Cable   | 003                 |
| Cable Star         | 056                         | Pioneer            | 023 144 533     | Universal      | 022 056 153 191 207 |
| Cabletenna         | 022                         | Popular Mechanics  | 400             | Videoway       | 250                 |
| Cableview          | 022                         | Pulsar             | 000             | Viewstar       | 027 063 258         |
| Century            | 153                         | Radio Shack        | 015 315         | Zenith         | 000 054             |
| Citizen            | 153 315                     | RCA                | 021             | Zentek         | 400                 |
| Colour Voice       | 025 031                     | Realistic          | 207             |                |                     |
| Comtronics         | 040                         | Regal              | 020 259         |                |                     |
| Contec             | 019                         | Regency            | 002             |                |                     |
| Eastern            | 002                         | Rembrandt          | 011             |                |                     |
| Everquest          | 015 040                     | Runco              | 000             |                |                     |
| Focus              | 400                         | Samsung            | 040 144         |                |                     |
| Garrard            | 153                         | Scientific Atlanta | 006 008 017 477 |                |                     |
| GC Electronics     | 056 207                     | Signal             | 015 040         |                |                     |
| Gemini             | 015                         | Signature          | 011             |                |                     |
| General Instrument | 011 476                     | SL Marx            | 040             |                |                     |
| Gold Star          | 040 144                     | Sprucer            | 021             |                |                     |
| Hamlin             | 009 020 034 259             | Starcom            | 003 015         |                |                     |
| Hitachi            | 011                         | Stargate           | 015 040         |                |                     |
| Hyltex             | 007                         | Starguest          | 015             |                |                     |
| Jasco              | 153 315                     | Sylvania           | 001             |                |                     |
| Jerrold            | 003 011 012 014 015 476     | Tandy              | 258             |                |                     |
| Magnavox           | 027                         | Televue            | 040             |                |                     |
| Memorex            | 000                         | Texscan            | 001             |                |                     |
| Movie Time         | 063 156                     | TFC                | 310             |                |                     |
| Novaplex           | 618                         | Tocom              | 012 013         |                |                     |
| NSC                | 063 156                     | Toshiba            | 000             |                |                     |

## PARA AJUSTAR O CÓDIGO DO VCR:

1) Ajuste a chave CATV/TV para TV.

2) Aponte o controle para o VCR e pressione simultaneamente as teclas TV POWER e RETURN+, e depois solte-as.

3) Com o teclado numérico digite o código de três dígitos. Em seguida, pressione a tecla RETURN+. Se o VCR não respondeu aos comandos do controle remoto:

1) Aponte o controle para o VCR e pressione simultaneamente as teclas TV POWER e RETURN+, e após solte-as.

2) Aponte o controle para o VCR e pressione repetidamente a tecla VCR POWER até que o VCR responda.

3) Quando o VCR responder aos comandos, pressione a tecla RETURN+.





## PROGRAMANDO O CONTROLE REMOTO

### CÓDIGOS DE VCRs

| VCRs            | CÓDIGOS                     | VCRs           | CÓDIGOS                     | VCRs            | CÓDIGOS             |
|-----------------|-----------------------------|----------------|-----------------------------|-----------------|---------------------|
| Admiral         | 048                         | Lloyd          | 000                         | Salora          | 075                 |
| Adventura       | 000                         | Lloyd's        | 208                         | Samsung         | 045 051 053 240     |
| Aiko            | 278                         | Logik          | 072                         | Sanky           | 039 048             |
| Aiwa            | 000                         | LXI            | 037                         | Sansui          | 041 067 271         |
| Aikai           | 041 049 053 061 106         | Magnavox       | 035 039 081 149             | Sanyo           | 046 047 104 240     |
| American High   | 035                         | Magnin         | 240                         | Scott           | 043 045 121 184 211 |
| Asha            | 240                         | Marantz        | 035 081                     | Sears           | 212 035 037 042 046 |
| Audiobox        | 037                         | Marta          | 037                         |                 | 047 054             |
| Beaumarck       | 240                         | Matsushita     | 035 162                     |                 | 066 104 105 067 008 |
| Beil & Howell   | 104                         | MEI            | 035                         | Sharp           | 048 062             |
| Broksonic       | 121 184 211 295 361         | Memorex        | 000 035 037 039 046 047 048 | Shintom         | 072                 |
| Calix           | 037                         |                | 104 240                     | Shogun          | 051 240             |
| Canon           | 035                         | MGA            | 043 061                     | Singer          | 072                 |
| Capehart        | 020                         | MGN Technology | 240                         | Sony            | 032 033 034 035 253 |
| Carver          | 081                         | Minolta        | 042 105                     | STS             | 042                 |
| CCE             | 072 278                     | Mitsubishi     | 043 061 067 075 173         | Sunpak          | 253                 |
| Citizen         | 037 278                     | Motorola       | 035 048                     | Sylvania        | 000 035 043 081     |
| Colt            | 072                         | MTC            | 000 240                     | Symphonic       | 000                 |
| Craig           | 037 047 072 240 271         | Multitech      | 000 072                     | Tatung          | 041                 |
| Curtis Mathes   | 035 041 060                 | NAD            | 058                         | Teac            | 000 041             |
| Cybermax        | 051 240                     | NEC            | 038 040 041 067 104         | Technics        | 035 162             |
| Daewoo          | 020 045 278                 | Nikko          | 037                         | Teknika         | 000 035 037         |
| Daytron         | 020                         | Nikon          | 034 253                     | TMK             | 036 208 240         |
| Dynatech        | 000                         | Noblex         | 240                         | Toshiba         | 043 045 066 212 366 |
| Electrohome     | 037                         | Olympus        | 035                         | Totevision      | 037 240             |
| Electrophonic   | 037                         | Optimus        | 037 048 058 104 162 432     | Unitech         | 240                 |
| Emerax          | 032                         | Optonica       | 062                         | Vector          | 045                 |
| Emerson         | 000 002 036 037 043 061 068 | Orion          | 295 479                     | Vector Research | 038 040             |
|                 | 088 121 184 208 209 211 212 | Panasonic      | 035 077 162 225             | Video Concepts  | 040 045 061         |
|                 | 278 294 295 361 479         | Penney         | 035 037 038 040 042 054 240 | Videasonic      | 240                 |
| Fieher          | 047 054 066 104             | Pentax         | 042 065 105                 | Wards           | 000 035 042 047 048 |
| Fuji            | 033 035                     | Philco         | 035                         |                 | 060 062 072 081 149 |
| Funai           | 000                         | Philips        | 035 062 081                 |                 | 212 240             |
| Garrard         | 000                         | Pilot          | 037                         | XR-1000         | 000 035 072         |
| GE              | 035 060 065 202             | Pioneer        | 058 067                     | Yamaha          | 038                 |
| Go Video        | 232                         | Portland       | 020                         | Zenith          | 033 034 039         |
| GoldStar        | 037 038                     | Profrontronic  | 240                         |                 |                     |
| Gradiente       | 000                         | Protec         | 072                         |                 |                     |
| Grundig         | 195                         | Pulsar         | 039 051                     |                 |                     |
| Harley Davidson | 000                         | Quarter        | 046                         |                 |                     |
| Harman/Kardon   | 038 075                     | Quartz         | 046                         |                 |                     |
| Harwood         | 068 072                     | Quasar         | 035 077 162                 |                 |                     |
| Headquarter     | 046                         | Radio Shack    | 000 037                     |                 |                     |
| Hi-Q            | 047                         | Radix          | 037                         |                 |                     |
| Hitachi         | 041 042 065 105 166         | Randex         | 037                         |                 |                     |
| Jensen          | 041                         | RCA            | 042 060 065 077 105 106 149 |                 |                     |
| JVC             | 067 008 041                 |                | 202                         |                 |                     |
| KEC             | 037 278                     | Realistic      | 000 035 037 046 047 048 062 |                 |                     |
| Kenwood         | 038 041 067                 |                | 066 104                     |                 |                     |
| KLH             | 072                         | Ricoh          | 034 253                     |                 |                     |
| Kodak           | 035 037                     | Runco          | 039                         |                 |                     |



## CORREÇÃO DE PROBLEMAS

| PROBLEMAS                                  | VERIFIQUE   |
|--|---|
| A TV não liga                              | <ul style="list-style-type: none"> <li>• Verifique se a tomada de força está desligada.</li> <li>• Ligue-o em outra tomada, ou se for a uma régua de força, verifique se o fusível está queimado.</li> </ul>  |
| Sem imagem ou som                          | <ul style="list-style-type: none"> <li>• Verifique se a antena está bem conectada.</li> <li>• Verifique se a imagem recebida é da TV ou do VCR. Veja a posição da tecla TV/VIDEO (página 17).</li> <li>• Verifique se o sistema de recepção está ajustado corretamente (página 12).</li> <li>• O canal de TV pode estar com problema. Tente sintonizar outro canal</li> </ul> |
| O controle remoto não funciona             | <ul style="list-style-type: none"> <li>• Verifique se as pilhas estão boas e se foram corretamente instaladas.</li> <li>• Certifique-se de que não haja objetos obstruindo o caminho do sinal do controle remoto para o TV.</li> <li>• Verifique a posição da chave TV/CATV — Ajuste para TV quando for assistir televisão.</li> </ul>  |
| Você não pode sintonizar determinado canal | <ul style="list-style-type: none"> <li>• Talvez você esteja muito longe do televisor. A distância máxima recomendada é de 7 metros.</li> <li>• Certifique-se de que os canais foram programados. Veja Resumo de Canais na página 11.</li> <li>• Talvez o canal esteja censurado, selecione o canal através do teclado numérico.</li> </ul>                                    |
| A TV desligou                              | <ul style="list-style-type: none"> <li>• Talvez o Timer esteja programado, Ligue a TV e veja a página 15.</li> <li>• Faltou energia elétrica ou alguém desligou a tomada. Ajuste o relógio. Veja a 15.</li> <li>• Talvez o Sleep Timer esteja acionado. Veja a página 16.</li> </ul>  |
| Relógio não funciona                       | <ul style="list-style-type: none"> <li>• Acabou a energia e o relógio não foi reajustado. Reajuste o relógio. Veja a página 15.</li> </ul>  |
| O Timer ON fica piscando                   | <ul style="list-style-type: none"> <li>• O TV está com problema. Desligue-o da tomada de força e solicite auxílio do Serviço Autorizado.</li> </ul>   |
| IMAGEM                                     | VERIFIQUE   |
| Cores pobres                               | <ul style="list-style-type: none"> <li>• As cores foram ajustadas incorretamente. Veja a página 13.</li> <li>• Os ajustes de imagem podem estar incorretos. Veja a página 16.</li> </ul>  |
| Aparece linhas ou riscos na tela           | <ul style="list-style-type: none"> <li>• Verifique se não há interferência de outros produtos ligados à mesma tomada, assim como computadores, outra TV ou VCR. Ligue os demais aparelhos em outra tomada.</li> </ul>   |
| Manchas na imagem                          | <ul style="list-style-type: none"> <li>• Aparelhos como aspirador, liquidificador e lâmpadas de néon causam este tipo de interferência. Remova a antena de posição para longe dos equipamentos que causam tal interferência ou substitua o fio da antena por um cabo coaxial, que é menos propenso a interferências.</li> </ul>   |
| Sombras na imagem                          | <ul style="list-style-type: none"> <li>• Prédios e aeronaves podem refletir um segundo sinal original atrasado com relação ao original. Ajuste o posicionamento da antena.</li> </ul>   |
| Imagem com neve/ruído                      | <ul style="list-style-type: none"> <li>• A antena pode estar com defeito, desconectada ou mal direcionada. Verifique as conexões de antena na página 4. Se estiver com problemas você deverá refazê-las.</li> </ul>   |
| Boxe preto cobre a tela                    | <ul style="list-style-type: none"> <li>• Pressione repetidamente a tecla CLOSED CAPTION para desligar a função.</li> </ul>  |
| SOM  | VERIFIQUE   |
| SAP ou estéreo não podem ser ouvidos       | <ul style="list-style-type: none"> <li>• Verifique se o MTS está corretamente ajustado. Veja maiores detalhes na página 14, Modo MTS.</li> </ul>  |
| Sem som nos alto-falantes                  | <ul style="list-style-type: none"> <li>• Os falantes do TV podem estar desligados no menu. Veja a página 10.</li> </ul>   |
| NÃO É PROBLEMA                             | NÃO SE PREOCUPE, ISTO É NORMAL  |
| Eletricidade estática                      | <ul style="list-style-type: none"> <li>• É normal você sentir a eletricidade estática ao tocar na tela do televisor.</li> </ul>   |
| Estálos ocasionais no som                  | <ul style="list-style-type: none"> <li>• É normal o TV emitir estes estalos quando é ligado e desligado. A não ser quando o som e imagem não estão normais, isto é normal.</li> </ul>   |

## ESPECIFICAÇÕES TÉCNICAS

|                                |   |
|--------------------------------|---|
| Sistema de recepção .....      | NTSC, PAL-N, PAL-M  |
| Faixa de recepção .....        | VHF 2 a 13, UHF 14 a 69<br>Sub Mid, Mid, Super, Hyper e Ultra<br>(181 channel frequency synthesizer system) |
| Consumo .....                  | Max. 145W méd. 105W   |
| Cinescópio .....               | 96.5cm medidos diagonalmente (AV-T3885)<br>86.4cm medidos diagonalmente (AV-T3487)                          |
| Saída de áudio .....           | 5W x 2  |
| Alto-falantes .....            | 8 cm x 12 cm oval x2 (AV-T3885)<br>5 cm x 12 cm oval x 2 (AV-T3487)   |
| Terminal de antena .....       | 75 ohms (VHF/UHF) (conector tipo F)   |
| Alimentação .....              | AC120V-240V (calculado)<br>AC90V-AC260V(faixa de operação)  |
| Terminais de entrada .....     | Video: 1V(p-p), 75 ohms<br>Áudio:500mV(rms) (-4dBs) alta impedância   |
| Saída de áudio variávelP ..... | Maior que 0 mV(rms) a 1550 mV(rms) (+6dBs),<br>baixa impedância (400Hz quando modulado a 100%)              |
| Dimensões (L x A x P) .....    | 86 cm x 76.5 cm x 60.3 cm (AV-T3885)<br>76.8 cm x 66.4 cm x 54.8 cm (AV-T3487)                              |
| Peso .....                     | 69.2 kg (AV-T3885)<br>54.0 kg (AV-T3487)  |
| Acssórios .....                | Controle remoto x1<br>pilhas tipo AAA x 2   |

Projeto e especificações técnicas sujeitos a alterações sem aviso prévio.

# SPECIFIC SERVICE INSTRUCTIONS

## REPLACEMENT OF CHIP COMPONENT

### ■ CAUTIONS

1. Avoid heating for more than 3 seconds.
2. Do not rub the electrodes and the resist parts of the pattern.
3. When removing a chip part, melt the solder adequately.
4. Do not reuse a chip part after removing it.

### ■ SOLDERING IRON

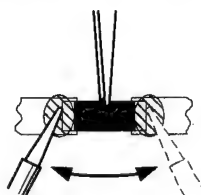
1. Use a high insulation soldering iron with a thin pointed end of it.
2. A 30w soldering iron is recommended for easily removing parts.

### ■ REPLACEMENT STEPS

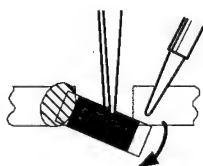
#### 1. How to remove Chip parts

##### ◆ Resistors, capacitors, etc

- (1) As shown in the figure, push the part with tweezers and alternately melt the solder at each end.



- (2) Shift with tweezers and remove the chip part.



##### ◆ Transistors, diodes, variable resistors, etc

- (1) Apply extra solder to each lead.



- (2) As shown in the figure, push the part with tweezers and alternately melt the solder at each lead. Shift and remove the chip part.

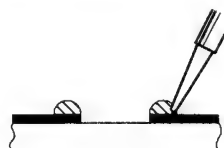


*Note : After removing the part, remove remaining solder from the pattern.*

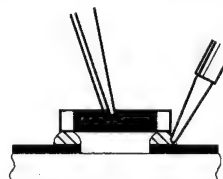
#### 2. How to install Chip parts

##### ◆ Resistors, capacitors, etc

- (1) Apply solder to the pattern as indicated in the figure.

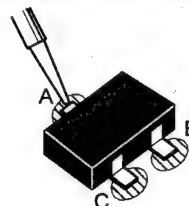


- (2) Grasp the chip part with tweezers and place it on the solder. Then heat and melt the solder at both ends of the chip part.

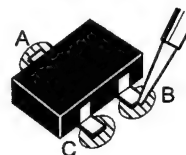


##### ◆ Transistors, diodes, variable resistors, etc

- (1) Apply solder to the pattern as indicated in the figure.
- (2) Grasp the chip part with tweezers and place it on the solder.
- (3) First solder lead **A** as indicated in the figure.



- (4) Then solder leads **B** and **C**.



## DISASSEMBLY PROCEDURE

### REMOVING THE REAR COVER

1. Unplug the power plug.
2. As shown in Fig.2, remove the **11** screws marked **(A)**.
3. Remove the rear cover toward you.

When reinstalling the rear cover, carefully push it inward after inserting the chassis into the rear cover groove.

### REMOVING THE CHASSIS

- After removing the rear cover.
1. Slightly raise the both sides of the chassis by hand and remove the **2** claws under the both sides of the chassis from the front cabinet.
  2. Withdraw the chassis backward along the rail in the arrow direction marked **(B)** as shown in the Fig.2.  
(If necessary, take off the wire clamp, connectors etc.)

When conducting a check with power supplied, be sure to confirm that the CRT earth wire is connected to the CRT SOCKET PWB and the MAIN PWB.

### REMOVING THE TERMINAL BOARD

- After removing the rear cover.
1. As shown in Fig.2, remove the **2** screws marked **(C)**.
  2. As shown in Fig.1, after removing the claw marked **(D)** in the direction of arrow mark.
  3. When you pull out the TERMINAL BOARD in the direction of arrow marked **(E)** as shown in Fig.1, it can be removed.
  4. Thus the connector should be securely inserted when the TERMINAL BOARD is installed again.

### REMOVING THE FRONT CONTROL PW BOARD

- After removing the rear cover and chassis.
1. As shown in Fig.2, remove the screw marked **(F)**.
  2. Remove the PWB protector.
  3. Then remove the FRONT CONTROL PWB.

### CHECKING THE MAIN PW BOARD

To check the back side of the MAIN PW Board.

- 1) Pull out the chassis. (Refer to REMOVING THE CHASSIS).
- 2) Erect the chassis vertically so that you can easily check the back side of the MAIN PW Board.

#### [CAUTION]

- When erecting the chassis, be careful so that there will be no contacting with other PWB.
- Before turning on power, make sure that the wire connector, CRT earth wire and other connectors properly connected.
- When repair service, connect degaussing coil to **DEG** connector on MAIN PW board.

### WIRE CLAMPING AND CABLE TYING

1. Be sure to clamp the wire.
2. Never remove the cable tie used for tying the wires together.  
Should it be inadvertently removed, be sure to tie the wires with a new cable tie.

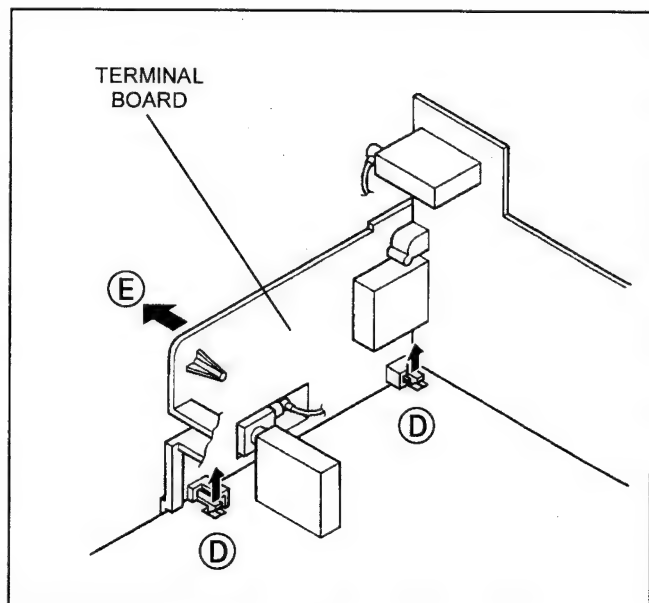


Fig.1



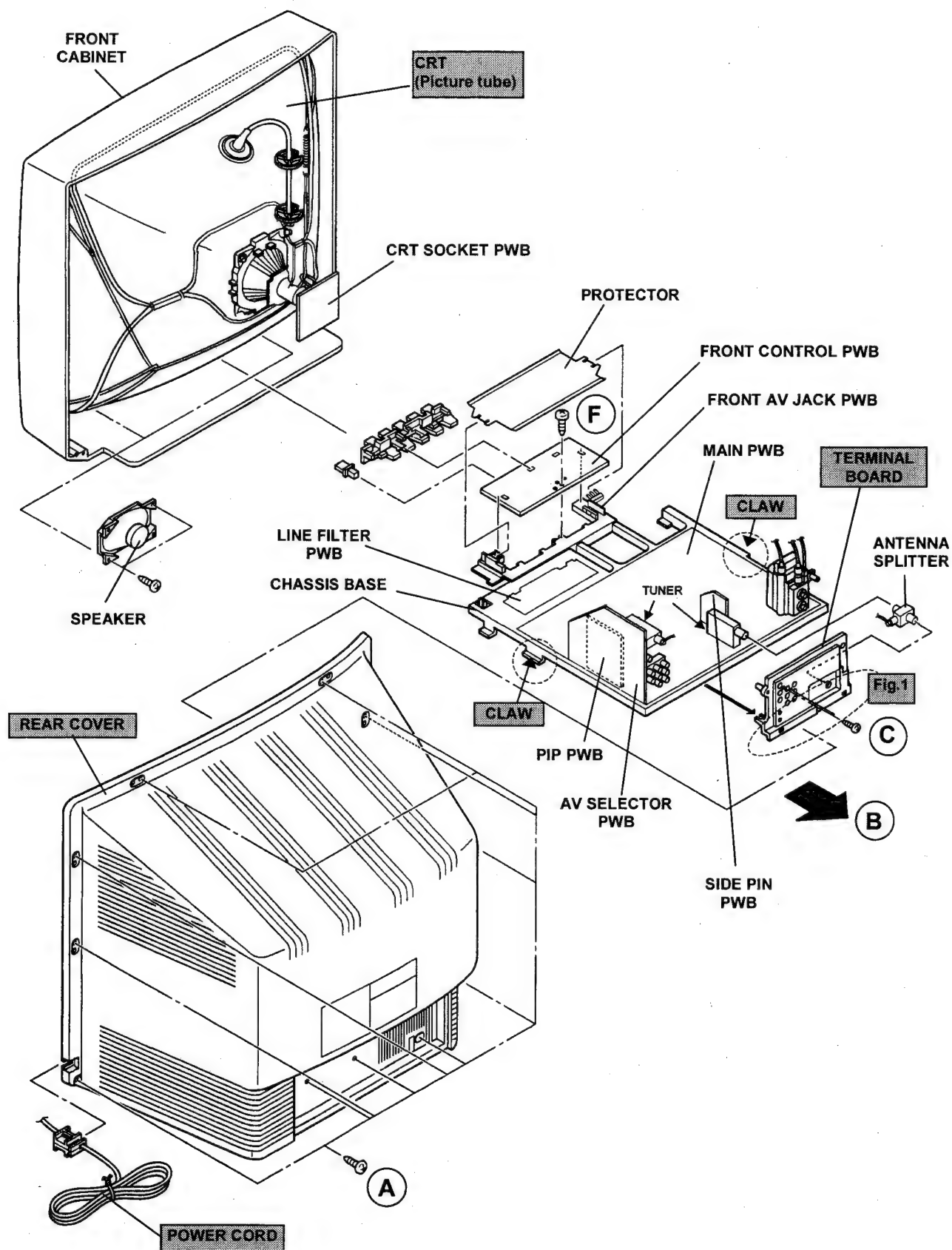


Fig. 2

REMOVING THE CRT

- \* Replacement of the CRT should be performed by 2 or more persons.
  - After removing the cover, chassis etc...
1. Putting the CRT change table on soft cloth, the CRT change table should also be covered with such soft cloth (shown in Fig.3).
  2. While keeping the surface of CRT down, mount the TV set on the CRT change table balanced will as shown in Fig.4.
  3. Remove 4 nuts marked by arrows with a box type screw driver as shown in Fig.4.
- Since the cabinet will drop when nuts have been removed, be sure to support the cabinet with hands.
4. After 4 nuts have been removed, put the cabinet slowly on cloth (At this time, be carefully so as not to damage the front surface of the cabinet) shown in Fig.5.
- The CRT should be assembled according to the opposite sequence of its dismantling steps.
  - \* The CRT change table should preferably be smaller than the CRT surface, and its height be about 35cm.

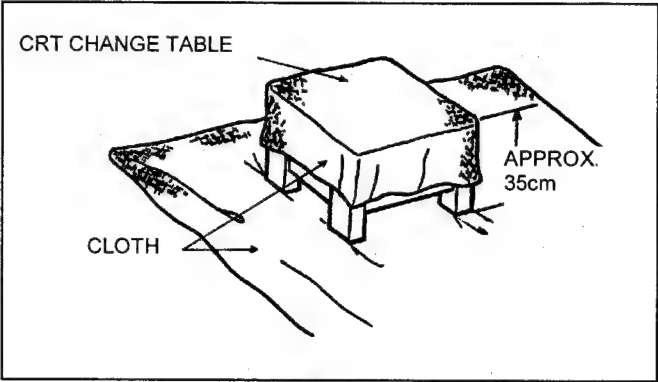


Fig. 3

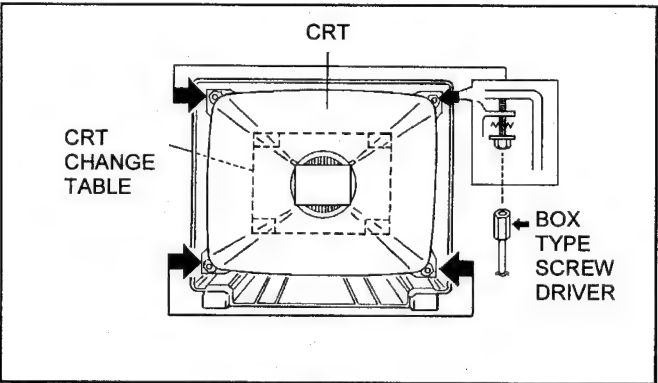


Fig. 4

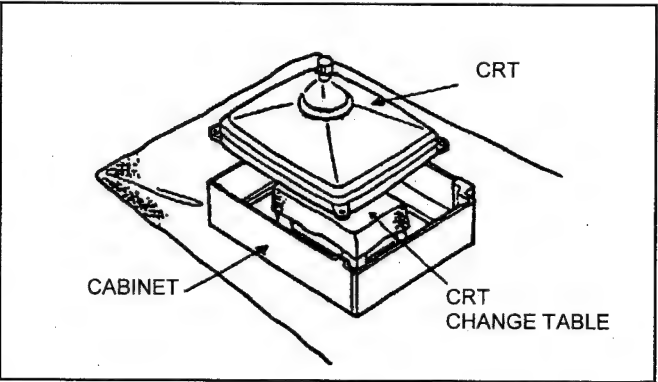


Fig. 5

COATING OF SILICON GREASE FOR ELECTRICAL INSULATION ON THE CRT ANODE CAP SECTION.

- Subsequent to replacement of the CRT and HV transformer or repair of the anode cap, etc. by dismantling them, be sure to coat silicon grease for electrical insulation as shown in Fig.6. Wipe around the anode button with clean and dry cloth. (Fig.6) Coat silicon grease on the section around the anode button. At this time, take care so that any silicon greases dose not stick to the anode button. (Fig.7)

★ Silicon grease product No. KS - 650N

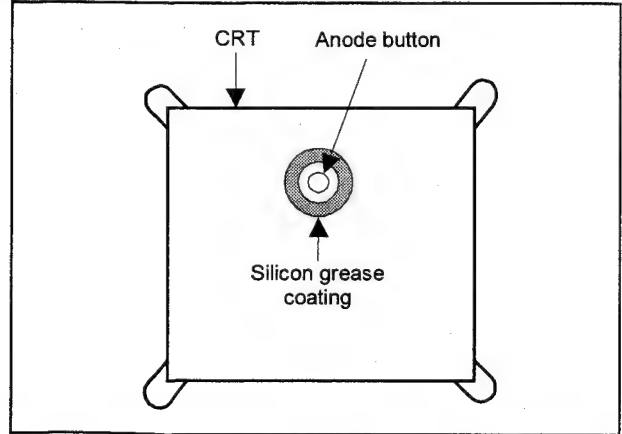


Fig. 6

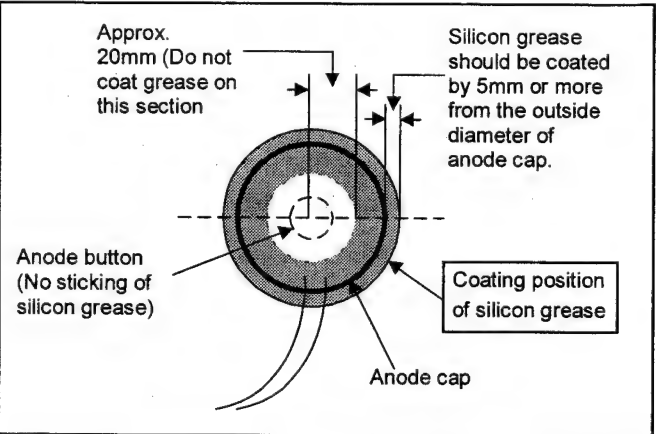


Fig. 7

# REPLACEMENT OF MEMORY IC

## 1. Memory IC

This model use the memory IC.

The memory IC stores data for proper operation of video and deflection circuits.

When replacing, be sure to use an IC containing this (initial value) data.

## 2. Memory IC replacement procedure

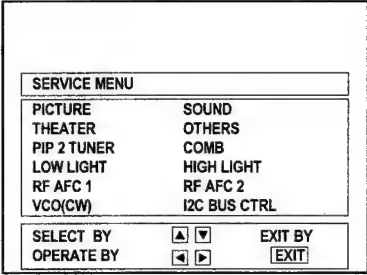
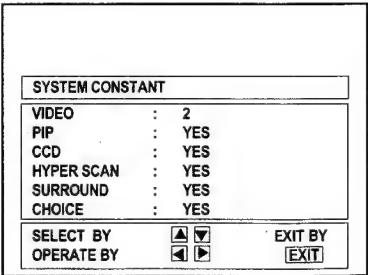
| PROCEDURE  | SCREEN DISPLAY   |
|--|--|
| <b>(1) Power off</b><br>Switch off the power and disconnect the power cord from the outlet.  |  |
| <b>(2) Replace the memory IC.</b><br>Be sure to use memory ICs written with the initial data values.   |  |
| <b>(3) Power on</b><br>Connect the power cord to the outlet and switch on the power.   |  |
| <b>(4) System constant check and setting</b><br><b>※It must not adjust without signal.</b> <ol style="list-style-type: none"> <li>1) Simultaneously press the DISPLAY key and VIDEO STATUS key of the remote control unit.</li> <li>2) The SERVICE MENU screen of Fig.1 will be displayed.</li> <li>3) While the SERVICE MENU on displaying, again simultaneously press the DISPLAY and VIDEO STATUS keys to display the Fig.2 SYSTEM CONSTANT screen.</li> <li>4) Refer to the SYSTEM CONSTANT table and check the setting items. Where these differ, select the setting item with the MENU UP / DOWN key and set the correction with the MENU LEFT / RIGHT keys. (The letters of the selected item are displayed in yellow.)</li> <li>5) After adjusting, release the MENU LEFT / RIGHT key to store the setting value.</li> <li>6) Press the EXIT key twice to return the normal screen.</li> </ol> |  <p>Fig.1</p>  |
| <b>(5) Receive channel setting</b><br>Refer to the <b>OPERATING INSTRUCTIONS (USER' S GUIDE)</b> and set the receive channels (Channels Preset) as described.  |  |
| <b>(6) User settings</b><br>Check the user setting items according to Table 2.<br>Where these do not agree, refer to the <b>OPERATING INSTRUCTIONS</b> and set the items as described.   |  <p>Fig.2</p> |
| <b>(7) SERVICE MENU setting</b><br>Verify the setting items of the SERVICE MENU, and reset where necessary(Fig.1). For setting, refer to the SERVICE ADJUSTMENT.   |  |

TABLE 1 (Settings of SYSTEM CONSTANT setting)

| Setting item | Setting constant | Setting value |
|--------------|------------------|---------------|
| VIDEO        | 1 / 2            | 2             |
| PIP 2 TUNER  | YES / NO         | YES           |
| CCD          | YES / NO         | YES           |
| HYPER SCAN   | YES / NO         | YES           |
| SURROUND     | YES / NO         | YES           |
| CHOISE       | YES / NO         | YES           |
|              |                  |               |

TABLE 2 (User setting)

| Setting item   | Setting value   | Setting item   | Setting value                               |
|--|---|--|---|
| <b>1. Use remote controller keys</b>   |   |  |   |
| POWER<br>CHANNEL<br>VOLUME<br>TV/VIDEO<br>CLOSED CAPTION<br>HYPER SURROUND   | ON<br>CH-02<br>Proper sound volume<br>TV<br>OFF<br>OFF  | DISPLAY<br>VIDEO STATUS<br>SLEEP TIMER<br>PIP SOURCE<br>PIP POSITION | OFF<br>STANDARD<br>00<br>CN-04<br>LOW-LEFT  |
| <b>2. Settings from MENU</b>   |   |  |   |
| TINT<br>COLOR<br>PICTURE<br>BRIGHT<br>DETAIL<br><br>NOTCH<br>NOISE MUTE<br>SET VIDEO STATUS<br><br>BASS<br>TREBLE<br>BALANCE<br><br>SET CLOCK<br>ON/OFF TIMER<br>SET LOCK CODE | CENTER (only NTSC)<br>CENTER<br>CENTER<br>CENTER<br>CENTER<br><br>OFF<br>ON<br>ALL CENTER<br><br>CENTER<br>CENTER<br>CENTER<br><br>Unnecessary to set<br>NO<br>Unnecessary to set | TV SPEAKER<br>LANGUAGE<br><br>CHANNEL SUMMARY<br><br>TUNER MODE      | ON<br>PORT<br><br>Set optionally<br><br>AIR |

# SERVICE ADJUSTMENTS

## ADJUSTMENT PREPARATION

1. There are 2 ways of adjusting this model : One is with the REMOTE CONTROL UNIT and the other is the conventional method using adjustment parts and component.
2. Adjustment with the remote control unit is made on the basis of the initial setting values, however, the new setting values which adjust the screen to the optimum condition may differ from the initial settings.
3. Make sure that AC power is turned on correctly.
4. Turn on the power for the set and test equipment before use, and start the adjustment procedures after waiting at least 30 minutes.
5. Never touch any adjustment parts which are not specified in the list for this adjustment-variable resistors, transformers, condensers, etc.
6. Presetting before adjustment.  
Unless otherwise specified in the adjustment instructions, preset the following functions with the remote control unit.

|                       |          |
|-----------------------|----------|
| VIDEO STATUS          | STANDARD |
| NOTCH                 | OFF      |
| BASS, TREBLE, BALANCE | CENTER   |
| HYPER SURROUND        | OFF      |

## ADJUSTMENT INSTRUMENTS AND FIXTURES

1. DC voltmeter(or digital voltmeter)
2. Oscilloscope
3. Signal generator ( Pattern generator ) [NTSC / PAL-M / PAL-N]
4. Remote control unit
5. TV audio multiplex signal generator
6. Frequency counter

## ADJUSTMENT ITEMS

- B1 Power supply check
- IF VCO adjustment
- TV DET LEVEL adjustment
- RF AGC adjustment
- FOCUS adjustment
- DEFLECTION CIRCUIT adjustment  
[NTSC or PAL-M]  
[PAL-N]
- VIDEO / CHROMA adjustment
  - WHITE BALANCE ( Low light ) adjustment
  - WHITE BALANCE ( High light ) adjustment
  - SUB BRIGHT adjustment
  - SUB CONTRAST adjustment
  - PAL-M / PAL-N SUB COLOR adjustment
  - NTSC COLOR / TINT adjustment
- PIP circuit adjustment
  - DISPLAY POSITION adjustment
  - SUB CONTRAST adjustment
  - SUB COLOR adjustment
  - SUB TINT adjustment
  - RF AGC adjustment
- MTS circuit adjustment
  - INPUT LEVEL adjustment
  - STEREO VCO adjustment
  - SAP VCO adjustment
  - FILTER check
  - SEPARATION adjustment

# BASIC OPERATION OF SERVICE MENU

1. Tool of SERVICE MENU operation.  
Operate the SERVICE MENU with the REMOTE CONTROL UNIT.

2. SERVICE MENU ITEMS

- With the SERVICE MENU, various settings can be made, and they are broadly classified in the following items of settings.
- PICTURE ..... This sets the setting values (adjustment values) of the VIDEO/CHROMA and DEFLECTION circuits.
  - SOUND ..... This sets the setting values (adjustment values) of the AUDIO circuit.
  - THEATER ..... This is used when the THEATER MODE is adjusted.
  - OTHERS ..... This sets the setting values (adjustment values) of the OTHERS circuit.
  - PIP 2TUNER ..... This sets the setting value (adjustment values) of the PICTURE-IN-PICTURE circuit.  
[PIP is means as PICTURE IN PICTURE]
  - COMB ..... This sets the setting values (adjustment values) of the comb filter circuit.
  - LOW LIGHT ..... This sets the setting values (adjustment values) of the WHITE BALANCE circuit.
  - HIGH LIGHT ..... This sets the setting values (adjustment values) of the WHITE BALANCE circuit.
  - RF AFC 1 ..... This is used when the IF VCO is adjusted. [Do not adjust about this item]
  - RF AFC 2 ..... This is used when the IF VCO is adjusted of the PIP. [Do not adjust about this item]
  - VCO(CW) ..... This is used when the IF VCO is adjusted. [Do not adjust about this item]
  - I<sup>2</sup>C BUS CTRL ..... This is used when ON/OFF of the I<sup>2</sup>C BUS CTRL is set. [Do not adjust about this item]

3. Basic Operations of the SERVICE MENU

(1) How to enter the SERVICE MENU.

Press the DISPLAY key and VIDEO STATUS key of the remote control unit simultaneously. The SERVICE MENU screen of Fig.1 will be displayed.

(2) Selection of SUB MENU screen

Press the UP / DOWN key of the MENU to select any of the following items.

(The letters of the selected items are displayed in yellow.)

- |                            |                                |
|----------------------------|--------------------------------|
| ● PICTURE                  | ● SOUND                        |
| ● THEATER                  | ● OTHERS                       |
| ● PIP 2TUNER               | ● COMB                         |
| ● LOW LIGHT                | ● HIGH LIGHT                   |
| ● RF AFC 1 [Do not adjust] | ● RF AFC2 [Do not adjust]      |
| ● VCO(CW) [Do not adjust]  | ● I2C BUS CTRL [Do not adjust] |

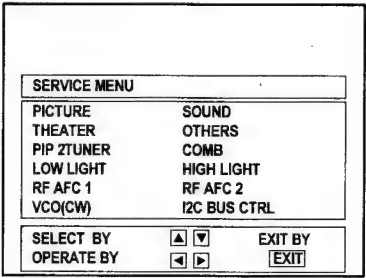


Fig.1

(3) Enter the any setting ( adjustment ) mode

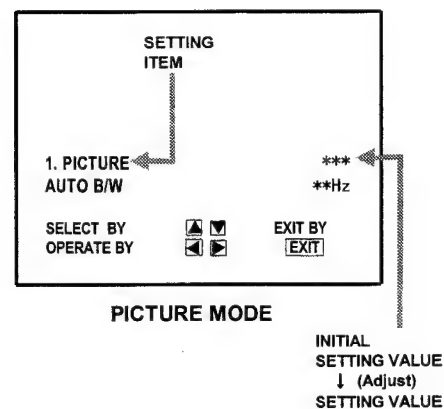
- PICTURE, SOUND, OTHERS and COMB mode
  - 1) If select any of PICTURE, SOUND , OTHERS and COMB items, and the LEFT / RIGHT key is pressed from SERVICE MENU ( MAIN MENU ), the SUB MENU screen will be displayed.
  - 2) Then the UP / DOWN key is pressed, the PICTURE mode screen, the SOUND mode screen, the OTHERS mode screen, the COMB mode screen is displayed, and the PICTURE, SOUND , OTHERS or COMB setting can be performed.
- THEATER, LOW LIGHT, HIGH LIGHT, RF AFC1, RF AFC 2, VCO(CW) and I<sup>2</sup>C BUS CTRL mode
  - 1) If select any of THEATER / LOW LIGHT / HIGH LIGHT / RF AFC 1 / RF AFC 2 / VCO(CW) / I2C BUS CTRL items, and the LEFT / RIGHT key is pressed from SERVICE MENU ( MAIN MENU ), the screens will be displayed.
  - 2) Then the settings or verifications can be performed.
- PIP mode
  - 1) If select the PIP item, and the LEFT / RIGHT key is pressed from SERVICE MENU (MAIN MENU), the screen will be displayed.
  - 2) Then UP / DOWN key is pressed, the PIP mode screen is displayed, and the PIP setting can be performed.

**(4) Setting method**

- 1) UP / DOWN key of the MENU  
Select the item.
- 2) LEFT / RIGHT key of the MENU  
Setting(adjust) the value of the items.  
When the key is released the setting value will be stored (memorized).
- 3) EXIT key  
Returns to the previous screen.

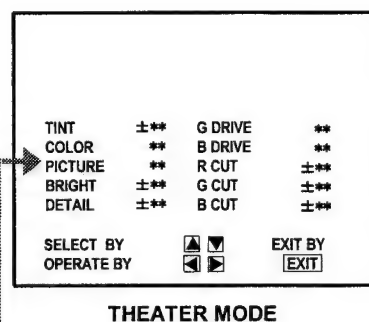
**[NOTE] (PICTURE & COMB MODE ONLY)**

When the INITIAL SETTING VALUE is turned to yellow, you can adjust the values but you cannot adjust the values when it is turned to red (because the signal conditions, etc. are met).

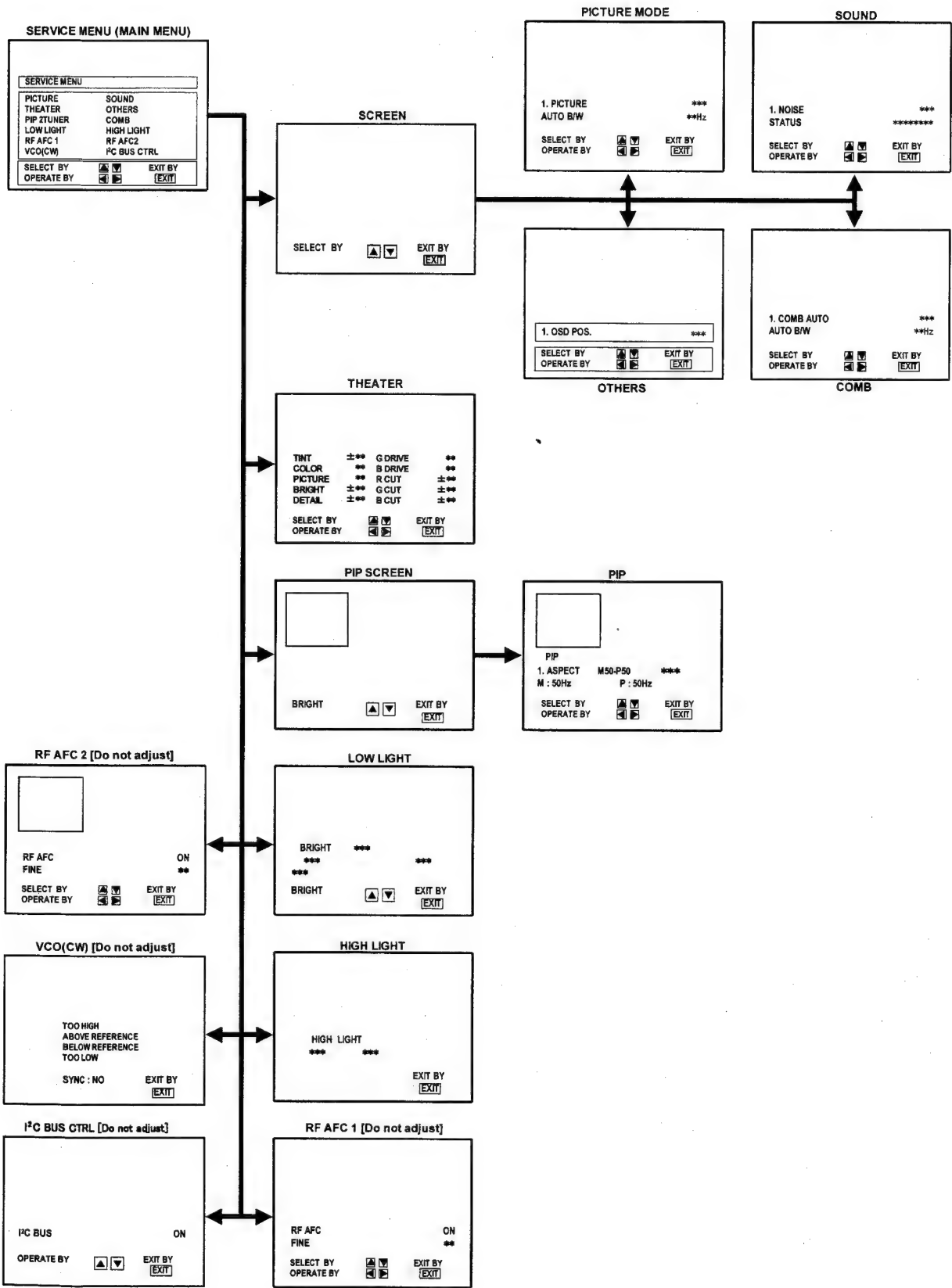
**(5) Releasing SERVICE MENU**

- 1) After returning to the SERVICE MENU upon completion of the setting (adjustment) work, press the EXIT key again.

★ The settings for LOW LIGHT and HIGH LIGHT are described in the WHITE BALANCE page of ADJUSTMENT.

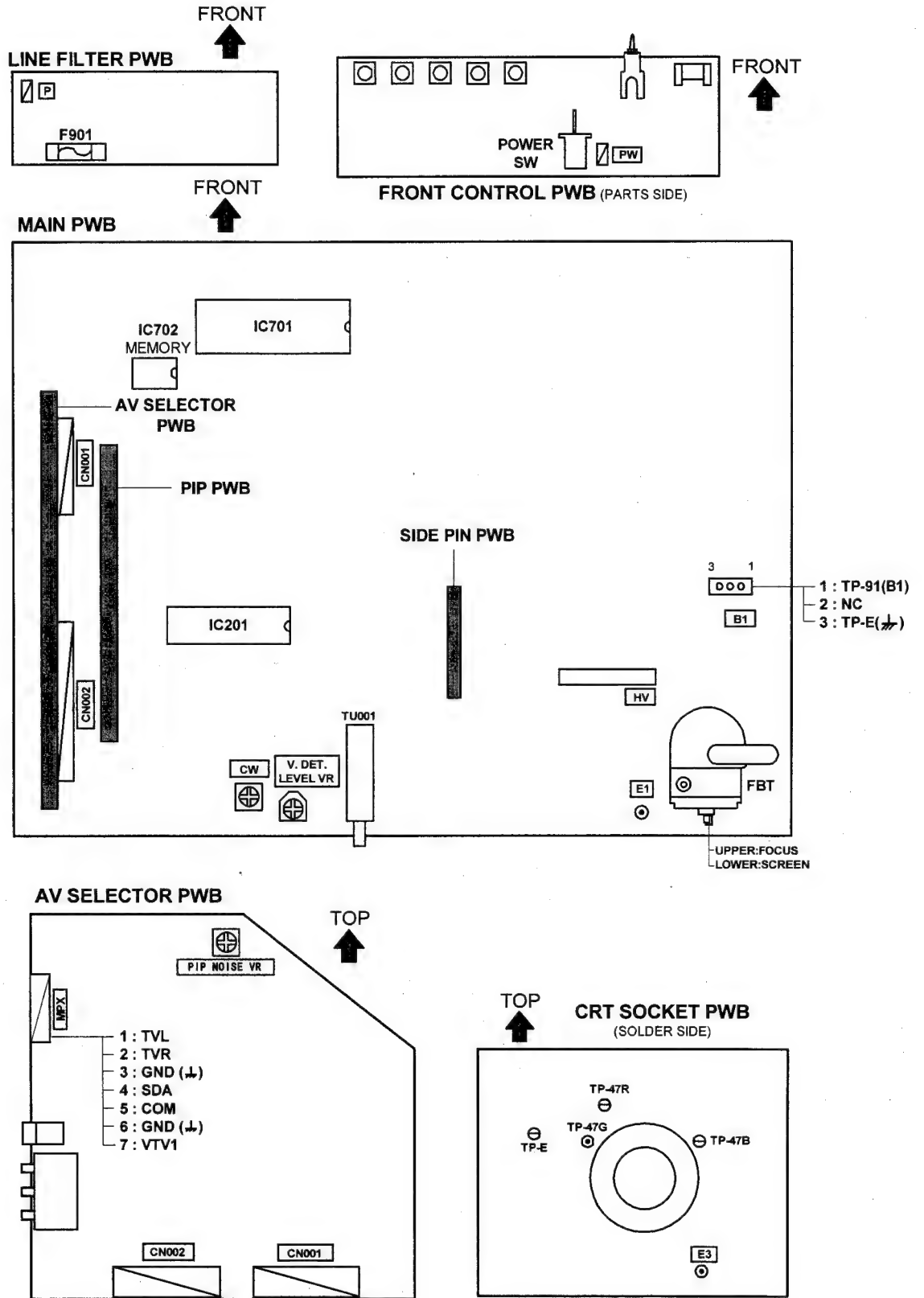


[ The letter of the selected items are displayed in yellow. ]





# ADJUSTMENT LOCATIONS



## INITIAL SETTING VALUE OF SERVICE MENU

1. Adjustment of the **SERVICE MENU** is made on the basis of the initial setting values ; however, the new setting values which set the screen in its optimum condition may differ from the initial setting.
2. Do not change the initial Setting Values of the Setting (Adjustment) items not listed in "ADJUSTMENT".

### ● PICTURE MODE

| No. | Setting (Adjustment) item | Variable range | Initial setting value |
|-----|---------------------------|----------------|-----------------------|
| 1.  | PICTURE                   | 0~127          | 70                    |
| 2.  | BRIGHT                    | 0~127          | 64                    |
| 3.  | COL. PAL-M                | 0~127          | 64                    |
| 4.  | COL. PAL-N                | 0~127          | 64                    |
| 5.  | COL. NTSC                 | 0~127          | 64                    |
| 6.  | TINT                      | 0~127          | 65                    |
| 7.  | TV DTL                    | 0~63           | 31                    |
| 8.  | EXT CV PICT.              | ±25            | ±0                    |
| 9.  | EXT CV BRI.               | ±25            | ±0                    |
| 10. | EXT CV COL.               | ±25            | ±0                    |
| 11. | EXT CV TINT               | ±25            | +3                    |
| 12. | EXT CV DTL                | 0~63           | 29                    |
| 13. | EXT SV PICT.              | +25            | ±0                    |
| 14. | EXT SV BRI.               | +25            | ±0                    |
| 15. | EXT SV COL.               | +25            | ±0                    |
| 16. | EXT SV TINT               | +25            | ±3                    |
| 17. | SV DTL                    | 0~63           | 26                    |
| 18. | P/N KILL                  | 0~1            | 1                     |
| 19. | Y S CONT                  | 0~31           | 31                    |
| 20. | TV Y-DL PAL               | 0~7            | 0                     |
| 21. | TV Y-DL NTSC              | 0~7            | 1                     |
| 22. | EXT Y-DL                  | 0~7            | 0                     |
| 23. | WPL SW                    | 0~1            | 0                     |
| 24. | Y GAMMA                   | 0~1            | 0                     |
| 25. | P/N G P.                  | 0~1            | 0                     |
| 26. | COL. L SW                 | 0~1            | 1                     |
| 27. | COL. LMT                  | 0~3            | 1                     |
| 28. | PN C. ATT                 | 0~3            | 1                     |
| 29. | OFST. SW                  | 0~1            | 0                     |
| 30. | OFFSET. B-Y               | 0~15           | 8                     |
| 31. | OFFSET. R-Y               | 0~15           | 8                     |
| 32. | TV C-TOF PAL              | 0~1            | 1                     |
| 33. | TV T FO PAL               | 0~3            | 1                     |
| 34. | TV T Q PAL                | 0~3            | 0                     |
| 35. | TV C-TOF NTSC             | 0~1            | 0                     |
| 36. | TV T FO NTSC              | 0~3            | 0                     |
| 37. | TV T Q NTSC               | 0~3            | 0                     |
| 38. | EXT C-TOF PAL             | 0~1            | 1                     |
| 39. | EXT T FO PAL              | 0~3            | 0                     |
| 40. | EXT T Q PAL               | 0~3            | 0                     |
| 41. | EXT C-TOF NTSC            | 0~1            | 1                     |
| 42. | EXT T FO NTSC             | 0~3            | 0                     |
| 43. | EXT T Q NTSC              | 0~3            | 0                     |
| 44. | C-TRAP                    | 0~1            | 1                     |
| 45. | C-TR. FO                  | 0~3            | 2                     |

| No. | Setting (Adjustment) item | Variable range | Initial setting value |
|-----|---------------------------|----------------|-----------------------|
| 46. | C-TRAP Q                  | 0~3            | 0                     |
| 47. | FIX B/W                   | 0~1            | 0                     |
| 48. | APA P FO                  | 0~3            | 2                     |
| 49. | DC TRAN                   | 0~7            | 4                     |
| 50. | B. ST. SW                 | 0~1            | 0                     |
| 51. | B. ST. PO.                | 0~7            | 2                     |
| 52. | ABL GAIN                  | 0~7            | 4                     |
| 53. | ABL PO.                   | 0~7            | 2                     |
| 54. | HALF T.                   | 0~2            | 1                     |
| 55. | DRV G SW                  | 0~1            | 0                     |
| 56. | NT. COMB                  | 0~1            | 0                     |
| 57. | COIN DET                  | 0~3            | 3                     |
| 58. | NOISE L                   | 0~3            | 3                     |
| 59. | VCD MODE                  | 0~1            | 0                     |
| 60. | V AGC SP                  | 0~1            | 0                     |
| 61. | V. POS. 50                | 0~7            | 3                     |
| 62. | V. SIZE 50                | 0~127          | 74                    |
| 63. | V. LIN. 50                | 0~31           | 21                    |
| 64. | V. EDGE 50                | 0~15           | 6                     |
| 65. | H. POS. 50                | 0~31           | 8                     |
| 66. | H. BLK. 50                | 0~7            | 0                     |
| 67. | H. SIZE 50                | 0~63           | 45                    |
| 68. | EW PIN 50                 | 0~63           | 15                    |
| 69. | TRAPEZ 50                 | 0~63           | 24                    |
| 70. | V S CR 50                 | 0~31           | 0                     |
| 71. | V POS. 60                 | 0~7            | 0                     |
| 72. | V SIZE 60                 | 0~127          | 72                    |
| 73. | V LIN. 60                 | 0~31           | 21                    |
| 74. | V EDGE 60                 | 0~15           | 7                     |
| 75. | H POS. 60                 | 0~31           | 11                    |
| 76. | H BLK. 60                 | 0~7            | 0                     |
| 77. | H SIZE 60                 | 0~63           | 44                    |
| 78. | EW PIN 60                 | 0~63           | 15                    |
| 79. | TRAPEZ 60                 | 0~63           | 30                    |
| 80. | V S CR 60                 | 0~31           | 0                     |
| 81. | AGC-MAIN                  | 0~255          | 160                   |

● SOUND MODE

| No. | Setting (Adjustment) item | Variable range | Initial setting value |
|-----|---------------------------|----------------|-----------------------|
| 1.  | NOISE                     | 0~1            | 1                     |
| 2.  | IN LEVEL                  | 0~63           | 15                    |
| 3.  | FH MON.                   | 0~1            | 0                     |
| 4.  | ST VCO                    | 0~63           | 25                    |
| 5.  | PILOT                     | 0~1            | 0                     |
| 6.  | FILTER                    | 0~63           | 30                    |
| 7.  | LOW SEP.                  | 0~63           | 22                    |
| 8.  | HI SEP.                   | 0~63           | 23                    |
| 9.  | 5FH MON.                  | 0~1            | 0                     |
| 10. | SAP VCO                   | 0~63           | 26                    |
| 11. | IN GAIN                   | 0~1            | 0                     |
| 12. | FIL. OFF                  | 0~10           | 0                     |

## ● THEATER MODE

| Setting (Adjustment) item | Variable range | Initial setting value |
|---------------------------|----------------|-----------------------|
| TINT                      | ±20            | ±00                   |
| COLOR                     | ±20            | -3                    |
| PICTURE                   | ±20            | -20                   |
| BRIGHT                    | ±20            | ±00                   |
| DETAIL                    | ±15            | ±00                   |
| G DRIVE                   | -99~+50        | -22                   |
| B DRIVE                   | -99~+50        | -54                   |
| R CUT. (R CUTOFF)         | ±10            | ±00                   |
| G CUT. (G CUTOFF)         | ±10            | ±00                   |
| B CUT. (B CUTOFF)         | ±10            | ±00                   |

## ● OTHERS MODE

| No. | Setting (Adjustment) item | Variable range | Initial setting value |
|-----|---------------------------|----------------|-----------------------|
| 1.  | OSD POS                   | 0~31           | 6                     |
| 2.  | LOCK DET                  | 0~1            | 0                     |
| 3.  | SD SEL                    | 0~2            | 0                     |
| 4.  | H CK SW                   | 0~1            | 0                     |
| 5.  | PIP LAST MEMO             | 0~1            | 0                     |
| 6.  | PAL C-TOF SW              | 0~1            | 0                     |

## ● COMB MODE

| No. | Setting (Adjustment) item | Variable range | Initial setting value |
|-----|---------------------------|----------------|-----------------------|
| 1.  | COMB AUTO                 | 0~1            | 1                     |
| 2.  | TV SW                     | 0~7            | 5                     |
| 3.  | VENH                      | 0~7            | 3                     |
| 4.  | CBPF                      | 0~7            | 1                     |
| 5.  | KILLER                    | 0~1            | 0                     |
| 6.  | 1LINEPOT                  | 0~1            | 0                     |
| 7.  | CORING                    | 0~1            | 0                     |

## ● LOW LIGHT MODE

| Setting (Adjustment) item | Variable range | Initial setting value |
|---------------------------|----------------|-----------------------|
| R CUTOFF                  | 0 ~ 255        | 20                    |
| G CUTOFF                  | 0 ~ 255        | 20                    |
| B CUTOFF                  | 0 ~ 255        | 20                    |

## ● HIGH LIGHT MODE

| Setting (Adjustment) item | Variable range | Initial setting value |
|---------------------------|----------------|-----------------------|
| G DRIVE                   | 0 ~ 255        | 128                   |
| B DRIVE                   | 0 ~ 255        | 128                   |

## ● RF AFC 1 MODE

| Setting (Adjustment) item | Variable range | Initial setting value |
|---------------------------|----------------|-----------------------|
| RF AFC 1                  | ON / OFF       | ON                    |
| FINE                      | -77 ~ +77      | ±** (Do not adj.)     |

## ● RF AFC 2 MODE

| Setting (Adjustment) item | Variable range | Initial setting value |
|---------------------------|----------------|-----------------------|
| RF AFC 2                  | ON / OFF       | ON                    |
| FINE                      | -77 ~ +77      | ±** (Do not adj.)     |

● I<sup>2</sup>C BUS CTRL MODE

| Setting (Adjustment) item | Variable range | Initial setting value |
|---------------------------|----------------|-----------------------|
| I <sup>2</sup> C BUS      | ON/OFF         | ON (Fixed)            |

## ● PIP MODE

| No. | Setting (Adjustment) item | Variable range | Initial setting value |
|-----|---------------------------|----------------|-----------------------|
| 1.  | ASPECT M50-P50            | 0~31           | 22                    |
| 2.  | V POS. M50-P50            | 0~127          | 24                    |
| 3.  | LOWER POS. M50-P50        | 0~127          | 71                    |
| 4.  | H POS M50-P50             | 0~127          | 42                    |
| 5.  | RIGHT POS M50-P50         | 0~127          | 73                    |
| 6.  | ASPECT M50-P60            | 0~31           | 25                    |
| 7.  | V POS. M50-P60            | 0~127          | 24                    |
| 8.  | LOWER POS. M50-P60        | 0~127          | 77                    |
| 9.  | H POS. M50-P60            | 0~127          | 48                    |
| 10. | RIGHT POS. M50-P60        | 0~127          | 89                    |
| 11. | ASPECT M60-P50            | 0~31           | 25                    |
| 12. | V POS. M60-P50            | 0~127          | 20                    |
| 13. | LOWER POS. M60-P50        | 0~127          | 64                    |
| 14. | H POS. M60-P50            | 0~127          | 45                    |
| 15. | RIGHT POS. M60-P50        | 0~127          | 91                    |
| 16. | ASPECT M60-P60            | 0~31           | 22                    |
| 17. | V POS. M60-P60            | 0~127          | 21                    |
| 18. | LOWER POS. M60-P60        | 0~127          | 59                    |
| 19. | H POS. M60-P60            | 0~127          | 41                    |
| 20. | RIGHT POS. M60-P60        | 0~127          | 80                    |
| 21. | V AREA P50                | 0~3            | 2                     |
| 22. | H AREA P50                | 0~3            | 3                     |
| 23. | CLAMP POS. P50            | 0~3            | 1                     |
| 24. | FRAME P50                 | 0~3            | 3                     |
| 25. | V AREA P60                | 0~3            | 2                     |
| 26. | H AREA P60                | 0~3            | 2                     |
| 27. | CLAMP POS. P60            | 0~3            | 1                     |
| 28. | FRAME P60                 | 0~3            | 3                     |
| 29. | PICTURE                   | 0~127          | 0                     |
| 30. | BRIGHT                    | 0~127          | 0                     |
| 31. | COLOR                     | 0~127          | 0                     |
| 32. | DETAIL                    | 0~63           | 15                    |
| 33. | R CUTOFF                  | 0~255          | 0                     |
| 34. | G CUTOFF                  | 0~255          | 0                     |
| 35. | B CUTOFF                  | 0~255          | 0                     |
| 36. | G DRIVE                   | 0~255          | 0                     |
| 37. | B DRIVE                   | 0~255          | 0                     |
| 38. | Y-DL PAL                  | 0~7            | 0                     |
| 39. | Y-DL NTSC                 | 0~7            | 0                     |
| 40. | Y/C DELAY PAL             | 0~7            | 4                     |

| No. | Setting (Adjustment) item | Variable range | Initial setting value |
|-----|---------------------------|----------------|-----------------------|
| 41. | Y/C DELAY NTSC            | 0~7            | 4                     |
| 42. | P/N KILL                  | 0~1            | 0                     |
| 43. | Y S CONT                  | 0~31           | 31                    |
| 44. | WPL SW                    | 0~1            | 0                     |
| 45. | Y GAMMA                   | 0~1            | 0                     |
| 46. | P/N G P.                  | 0~1            | 0                     |
| 47. | TOF F0                    | 0~3            | 0                     |
| 48. | TOF Q                     | 0~3            | 0                     |
| 49. | C-TRAP                    | 0~1            | 0                     |
| 50. | C-TRAP F0                 | 0~3            | 2                     |
| 51. | C-TRAP Q                  | 0~3            | 0                     |
| 52. | APA P. F0                 | 0~3            | 1                     |
| 53. | DC TRAN.                  | 0~7            | 4                     |
| 54. | B. ST. SW                 | 0~1            | 0                     |
| 55. | B. ST. P0.                | 0~7            | 0                     |
| 56. | DRV G SW                  | 0~1            | 0                     |
| 57. | VCD MODE                  | 0~1            | 0                     |
| 58. | H PHASE P50               | 0~31           | 7                     |
| 59. | V PHASE P50               | 0~7            | 0                     |
| 60. | H PHASE P60               | 0~31           | 6                     |
| 61. | V PHASE P60               | 0~7            | 0                     |
| 62. | RGB CONT.                 | 0~255          | 128                   |
| 63. | CONT2                     | 0~63           | 32                    |
| 64. | TINT                      | 0~127          | 62                    |
| 65. | COLOR2                    | 0~63           | 32                    |

# ■ ADJUSTMENTS

## B1 POWER SUPPLY

| Item                     | Measuring instrument             | Test point  | Adjustment item | Description   |
|--------------------------|----------------------------------|---|-----------------|---|
| Check of B1 Power supply | Signal generator<br>DC Voltmeter | B1 Connector 1 pin (TP-91)<br><br>B1 connector 3 pin (TP-E) (⚡) |                 | <ol style="list-style-type: none"> <li>1. Input a black and white signal (color off).</li> <li>2. Connect the DC voltmeter to B1 connector 1 pin (TP-91) and TP-E(⚡) (B1 connector 3 pin).</li> <li>3. Confirm that the voltage is <math>DC136.5V \pm 2.5V</math>.</li> </ol> |

## ADJUSTMENT OF IF VCO

| Item              | Measuring instrument | Test point | Adjustment item       | Description   |
|-------------------|----------------------|------------|-----------------------|---|
| IF VCO adjustment | Oscilloscope         |            | CW TRANSF. [MAIN PWB] | <p>● It must not adjust without signal.</p> <ol style="list-style-type: none"> <li>1. Receive a NTSC broadcast ( use channel without offset frequency).</li> <li>2. Select VCO(CW) from SERVICE MENU.</li> <li>3. Turn the CW transf. until the colour of the characters [TOO HIGH] displays on the screen changes yellow. At that time confirm the display that [SYNC:YES].</li> <li>4. Then turn the CW transf counter-clockwise until the colour of the characters [BELOW REFERENCE] changes yellow, and again confirm the display [SYNC:YES].</li> <li>5. Again turn the CW transf. to clockwise until the colour of the characters [ABOVE REFERENCE] changes yellow.</li> <li>6. Push EXIT key to turn to the SERVICE MENU.</li> </ol> |

TOO HIGH  
ABOVE REFERENCE  
BELOW REFERENCE  
TOO LOW

YELLOW

SYNC : YES      EXIT BY  
                                 EXIT

Careful

## ADJUSTMENT OF TV DET LEVEL

| Item                     | Measuring instrument                 | Test point   | Adjustment item         | Description  |
|--------------------------|--------------------------------------|--|-------------------------|--|
| TV DET. LEVEL Adjustment | Oscilloscope<br><br>Signal generator | MPX connector 7 pin VTV1<br><br>MPX connector 6 pin GND (⚡)<br><br>[AV SELECTOR PWB] | VIDEO DET VR [MAIN PWB] | <ol style="list-style-type: none"> <li>1. Input a color bar signal which includes the 100% white part.</li> <li>2. Connect the oscilloscope to 7 pin of MPX connector and 6 pin (⚡).</li> <li>3. Adjust the VIDEO DET VR as the level from sync to 100% WHITE become <math>1.00 \pm 0.04V</math>( peak to peak ).</li> </ol> |

100% White

1.0Vp-p

**ADJUSTMENT OF RF AGC**

| Item                     | Measuring instrument | Test point | Adjustment item       | Description  |
|--------------------------|----------------------|------------|-----------------------|--|
| <b>RF AGC adjustment</b> |                      |            | <b>No.81 AGC MAIN</b> | <ol style="list-style-type: none"> <li>1. Receive a broadcast.</li> <li>2. Select "No.81 AGC MAIN" of the PICTURE mode in SERVICE MENU.</li> <li>3. Press the MUTE key and turn off color.</li> <li>4. With the MENU LEFT key, get noise in the screen picture. (0 side of setting value)</li> <li>5. Press the MENU RIGHT key to up the setting value and stop when noise disappears on the picture.</li> <li>6. Change to other channels and make sure that there is no irregularity.</li> <li>7. Press the MUTE key to exit adjustment mode.</li> </ol> |

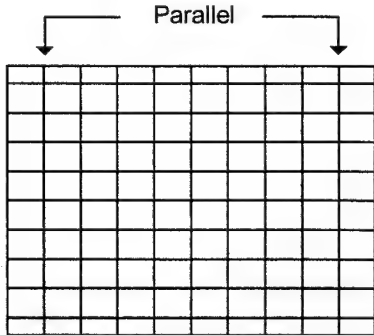
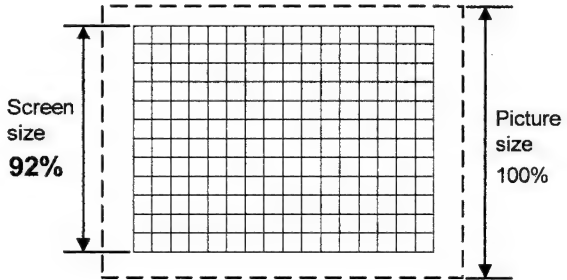
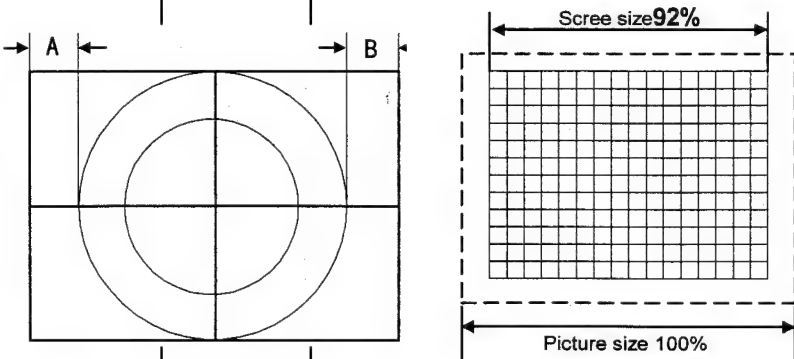
**ADJUSTMENT OF FOCUS**

| Item                    | Measuring instrument    | Test point | Adjustment item          | Description   |
|-------------------------|-------------------------|------------|--------------------------|---|
| <b>FOCUS adjustment</b> | <b>Signal generator</b> |            | <b>FOCUS VR [In FBT]</b> | <ol style="list-style-type: none"> <li>1. Input a crosshatch signal.</li> <li>2. While looking at the screen, adjust the FOCUS VR to make the vertical and horizontal lines will be clear and in fine detail.</li> <li>3. Make sure that the picture is in focus even when the screen gets darkened.</li> </ol> |

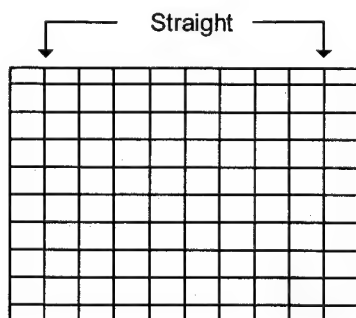


# ADJUSTMENT OF DEFLECTION CIRCUIT

[ NTSC or PAL-M SIGNAL ADJUSTMENT ( 60Hz signal ) ]

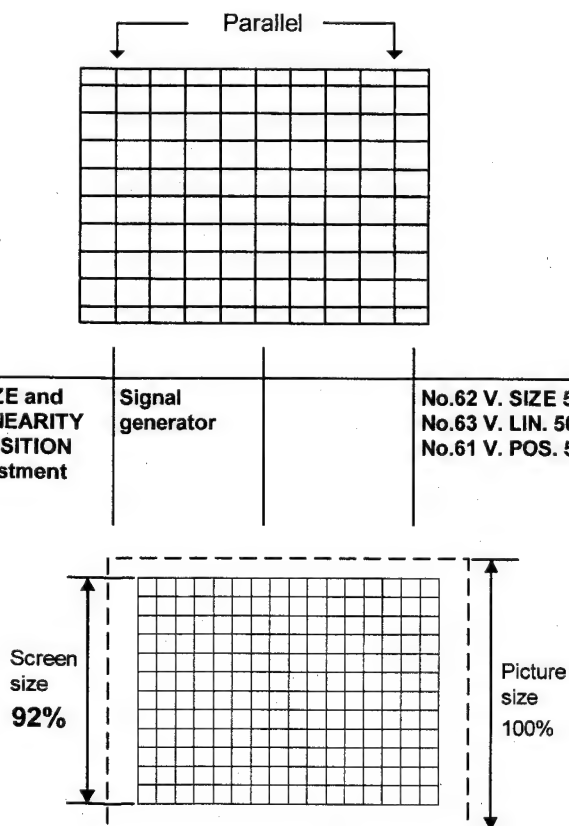
| Item  | Measuring instrument                        | Test point | Adjustment item  | Description  |
|---|---|------------|--|--|
| TRAPEZ adjustment                                     | Signal Generator<br>Remote control unit     |            | No.79 TRAPEZ 60  | <ol style="list-style-type: none"> <li>1. Input a crosshatch signal of the NTSC or PAL-M.</li> <li>2. Select the "No.79 TRAPEZ 60" of the PICTURE mode in SERVICE MENU.</li> <li>3. Adjust the "No.79 TRAPEZ 60" to bring the vertical lines of the screen edges are parallel.</li> </ol>  |
|   |   |            |  |   |
| V.SIZE and<br>V.LINEARITY<br>V.POSITION<br>Adjustment | Signal generator<br><br>Remote control unit |            | No.72 V. SIZE 60<br>No.73 V. LIN. 60<br>No.71 V. POS. 60 | <ol style="list-style-type: none"> <li>1. Input a crosshatch signal of the NTSC or PAL-M.</li> <li>2. Select the "No.72 V. SIZE 60" of the PICTURE mode in SERVICE MENU.</li> <li>3. Adjust the vertical SCREEN size to <b>92%</b> with the "No.72 V SIZE 60".</li> <li>4. Then select the "No.73 V. LIN. 60", and adjust the linearity of the top and bottom part of the screen to correct.</li> <li>5. And then confirm the "No.71 V. POS. 60" value is 0.</li> </ol>  |
|   |   |            |  |   |
| H. POSITION<br>H. SIZE<br>adjustment                  | Signal Generator<br><br>Remote control unit |            | No.75 H. POS. 60<br>No.77 H. SIZE 60                     | <ol style="list-style-type: none"> <li>1. Input a crosshatch circle signal of the NTSC or PAL-M.</li> <li>2. Select the "No.75 H. POS. 60" of the PICTURE mode in SERVICE MENU.</li> <li>3. Adjust the "No.75 H. POS. 60" to make the A=B as shown in figure.</li> <li>4. And then, adjust the "No.77 H. SIZE 60" to make the horizontal size to <b>92%</b> of the picture size as shown in figure below.</li> <li>5. As required repeat above steps 2 and 4.</li> </ol> |
|   |   |            |  |   |

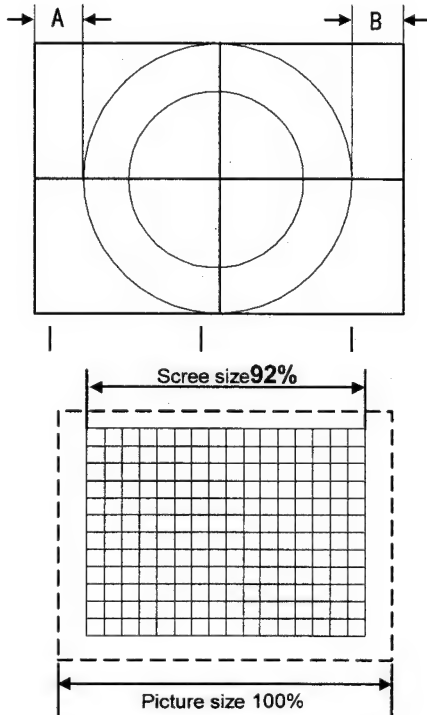
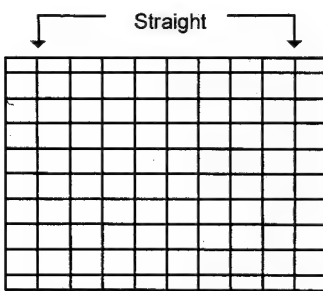
| Item  | Measuring instrument                        | Test point | Adjustment item  | Description   |
|---|---|------------|--|---|
| <b>EW PIN CORRECT V. LINEARITY adjustment</b> | Signal generator<br><br>Remote control unit |            | No.78 EW PIN 60<br>No.74 V. EDGE 60<br>No.80 V S CR 60 | <ol style="list-style-type: none"> <li>1. Input the crosshatch signal of the NTSC or PAL-M.</li> <li>2. Select the "No.78 EW PIN 60" of the PICTURE mode in SERVICE MENU.</li> <li>3. Adjust the "No.78 EW PIN 60" to make the second vertical lines at the left and right edges almost straight.</li> </ol> <p>★ if the left and right edges does not get almost straight, select pin instead of barrel.</p> <ol style="list-style-type: none"> <li>4. If the linearity is too bad, select "No.74 V. EDGE 60", "No.80 V S CR 60" to adjust to get exact square of crosshatch pattern.</li> </ol> |



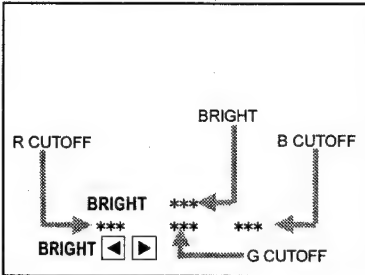
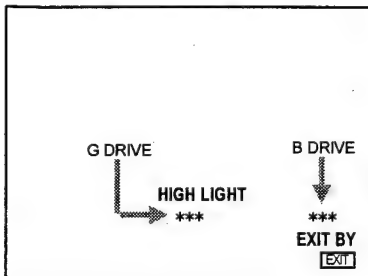
## [ PAL-N SIGNAL ADJUSTMENT ( 50Hz signal ) ]

| Item  | Measuring instrument | Test point | Adjustment item  | Description   |
|---|----------------------|------------|--|---|
| <b>TRAPEZ adjustment</b>                            | Signal Generator     |            | No.69 TRAPEZ 50  | <ol style="list-style-type: none"> <li>1. Input a crosshatch signal of the PAL-N.</li> <li>2. Select the "No.69 TRAPEZ 50" of the PICTURE mode in SERVICE MENU.</li> <li>3. Adjust the "No.69 TRAPEZ 50" to bring the vertical lines of the screen edges are parallel.</li> </ol>   |
| <b>V.SIZE and V.LINEARITY V.POSITION Adjustment</b> | Signal generator     |            | No.62 V. SIZE 50<br>No.63 V. LIN. 50<br>No.61 V. POS. 50 | <ol style="list-style-type: none"> <li>1. Input a crosshatch signal of the PAL-N.</li> <li>2. Select the "No.62 V. SIZE 50" of the PICTURE mode in SERVICE MENU.</li> <li>3. Adjust the vertical SCREEN size to <b>92%</b> with the "No.62 V SIZE 50".</li> <li>4. Then select the "No.63 V. LIN. 50", and adjust the linearity of the top and bottom part of the screen to correct.</li> <li>5. And adjust "No.61 V. POS. 50" to get the vertical center line and CRT vertical center as agree as possible.</li> </ol> |



| Item  | Measuring instrument                        | Test point | Adjustment item  | Description   |
|---|---|------------|--|---|
| H. POSITION<br>H. SIZE<br>adjustment  | Signal generator                            |            | No.65 H. POS. 50<br>No.67 H. SIZE 50                   | <ol style="list-style-type: none"> <li>1. Input a crosshatch circle signal of the PAL-N.</li> <li>2. Select the "No.65 H. POS. 50" of the PICTURE mode in SERVICE MENU.</li> <li>3. Adjust the "No.65 H. POS. 50" to make the A=B as shown in figure.</li> <li>4. And then, adjust the "No.67 H. SIZE 50" to make the horizontal size to <b>92%</b> of the picture size as shown in figure.</li> <li>5. As required above steps 2 and 4.</li> </ol>   |
|   |   |            |  |   |
| EW PIN<br>CORRECT<br>V. LINEARITY<br>adjustment                                     | Signal generator<br><br>Remote control unit |            | No.68 EW PIN 50<br>No.64 V. EDGE 50<br>No.70 V S CR 50 | <ol style="list-style-type: none"> <li>1. Input the crosshatch signal of the PAL-N.</li> <li>2. Select the "No.68 EW PIN 50" of the PICTURE mode in SERVICE MENU.</li> <li>3. Adjust the "No.68 EW PIN 50" to make the second vertical lines at the left and right edges almost straight.</li> </ol> <p>★ if the left and right edges does not get almost straight, select pin instead of barrel.</p> <ol style="list-style-type: none"> <li>4. If the linearity is too bad, select "No.64 V. EDGE 50", "No.70 V S CR 50" to adjust to get exact square of crosshatch pattern.</li> </ol> |
|  |   |            |  |   |

ADJUSTMENT OF VIDEO / CHROMA CIRCUIT

| Item   | Measuring instrument                    | Test point | Adjustment item   | Description   |
|--|---|------------|---|---|
| WHITE BALANCE (Low Light) adjustment   | Signal generator<br>Remote control unit |            | BRIGHT<br>R CUTOFF<br>G CUTOFF<br>B CUTOFF<br>SCREEN VR<br>[In FBT] | <div><div>1. Input a black and white signal (color off).</div><div>2. Select the LOW LIGHT mode from the SERVICE MENU.</div><div>3. Confirm the Initial setting value of "BRIGHT", "R CUTOFF", "G CUTOFF" and "B CUTOFF".</div><div>4. Display one horizontal line by pressing the ①key of the remote control unit.</div><div>5. Turn the SCREEN VR all the way to the left.</div><div>6. Turn the SCREEN VR gradually to the clockwise until either one of the red, blue or green colors faintly visible.</div><div>7. Use 4~9 keys of the remote control unit and adjust the other 2 colours to where the single horizontal line appears white.</div><div>8. Turn the SCREEN VR until the single horizontal line glows faintly.</div><div>9. Press the 2 key to return to the regular screen.</div><div>10. Check the PIP brightness and adjust it by the screen VR if it is not optimum.</div></div> |
| <div><div>[LOW LIGHT] MODE</div><div></div><div><div>Remote Control Unit</div><div><div>H.LINE ON<br/>①</div><div>H.LINE OFF<br/>②</div><div>EXIT<br/>③</div></div><div><div>R CUTOFF ▲<br/>④</div><div>G CUTOFF ▲<br/>⑤</div><div>B CUTOFF ▲<br/>⑥</div></div><div><div>R CUTOFF ▼<br/>⑦</div><div>G CUTOFF ▼<br/>⑧</div><div>B CUTOFF ▼<br/>⑨</div></div></div></div> |   |            |   |   |
| WHITE BALANCE (High Light) adjustment  | Signal generator<br>Remote control unit |            | G DRIVE<br>B DRIVE  | <div><div>1. Input a black and white signal (color off).</div><div>2. Select the HIGH LIGHT mode in the SERVICE MENU.</div><div>3. Confirm the initial setting value of "G DRIVE" and "B DRIVE".</div><div>4. Adjust the screen color to white with the 5, 6, 8 and 9 keys of the remote control unit. Not to adjust the R drive.</div></div>   |
| <div><div>[HIGH LIGHT] MODE</div><div></div><div><div>Remote Control Unit</div><div><div>①key : H.LINE ON</div><div>②key : H.LINE OFF</div><div>③key : EXIT</div></div><div><div>⑤key : G DRIVE ▲</div><div>⑥key : B DRIVE ▲</div><div>⑧key : G DRIVE ▼</div><div>⑨key : B DRIVE ▼</div></div></div></div>  |   |            |   |   |

| Item  | Measuring instrument | Test point | Adjustment item        | Description   |
|---|----------------------|------------|------------------------|---|
| <b>SUB BRIGHT adjustment</b>                    | Remote control unit  |            | <b>No.2 BRIGHT</b>     | <ol style="list-style-type: none"> <li>1. Receive any broadcast.</li> <li>2. Select "No.2 BRIGHT" of the PICTURE mode in SERVICE MENU.</li> <li>3. Confirm the initial setting value of the "No.2 BRIGHT".</li> <li>4. If the brightness is not the best with the initial setting value, make fine adjustment of the "No.2 BRIGHT" until you get the optimum brightness.</li> </ol> |
| <b>SUB CONTRAST adjustment</b>                  | Remote control unit  |            | <b>No.1 PICTURE</b>    | <ol style="list-style-type: none"> <li>1. Receive any broadcast.</li> <li>2. Select "No.1 PICTURE" of the PICTURE mode in SERVICE MENU.</li> <li>3. Confirm the initial setting value of the "No.1 PICTURE".</li> <li>4. If the contrast is not the best with the initial setting value, make fine adjustment of the "No.1 PICTURE" until you get the optimum contrast.</li> </ol>  |
| <b>PAL-M<br/>PAL-N<br/>SUB COLOR adjustment</b> | Remote control unit  |            | <b>No.3 COL. PAL-M</b> | <ol style="list-style-type: none"> <li>1. Receive any PAL-M broadcast.</li> <li>2. Select "No.3 COL.PAL-M" of the PICTURE mode in SERVICE MENU.</li> <li>3. Confirm the initial setting value of the "No.3 COL.PAL-M".</li> <li>4. If the color is not the best with the initial setting value, make fine adjustment until you get the best color.</li> </ol>                       |
|   |                      |            | <b>No.4 COL. PAL-N</b> | <ol style="list-style-type: none"> <li>1. Receive any PAL-N broadcast.</li> <li>2. Select "No.4 COL.PAL-N" of the PICTURE mode in SERVICE MENU.</li> <li>3. Confirm the initial setting value of the "No.4 COL.PAL-N".</li> <li>4. If the color is not the best with the initial setting value, make fine adjustment until you get the best color.</li> </ol>                       |
| <b>NTSC COLOR<br/>TINT adjustment</b>           | Remote control unit  |            | <b>No. 5 COL. NTSC</b> | <ol style="list-style-type: none"> <li>1. Receive any NTSC broadcast.</li> <li>2. Select "No. 5 COL. NTSC" of the PICTURE mode in SERVICE MENU.</li> <li>3. Confirm the initial setting value on the "No. 5 COL. NTSC".</li> <li>4. If the this in not the best with the initial setting value, make fine adjustment until you get the best color.</li> </ol>                       |
|   |                      |            | <b>No. 6 TINT</b>      | <ol style="list-style-type: none"> <li>1. Receive any NTSC broadcast.</li> <li>2. Select "No. 6 TINT" of the PICTURE mode in SERVECE MENU.</li> <li>3. Confirm the initial setting value of the "No. 6 TINT".</li> <li>4. If the tint is not the best with the initial setting value, make fine adjustment until you get the best tint.</li> </ol>                                  |

ADJUSTMENT OF PIP CIRCUIT

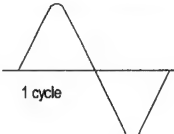
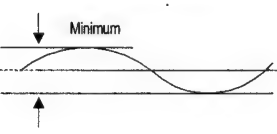
| Item  | Measuring instrument | Test point          | Adjustment item   | Description   |             |            |                     |              |              |              |                                |                     |    |                                |                     |    |                                |                   |    |                                 |                     |    |
|---|----------------------|---------------------|---|---|-------------|------------|---------------------|--------------|--------------|--------------|--------------------------------|---------------------|----|--------------------------------|---------------------|----|--------------------------------|-------------------|----|---------------------------------|---------------------|----|
| PIP DISPLAY POSITION adjustment   | Signal generator     |                     | No.2 V POSITION<br>M50-P50<br>No.3 LOWER POS.<br>M50-P50<br>No.4 H POSITION<br>M50-P50<br>No.5 RIGHT POS.<br>M50-P50<br><br>No.7 V POSITION<br>M50-P60<br>No.8 LOWER POS.<br>M50-P60<br>No.9 H POSITION<br>M50-P60<br>No.10 RIGHT POS.<br>M50-P60<br><br>No.12 V POSITION<br>M60-P50<br>No.13 LOWER POS.<br>M60-P50<br>No.14 H POSITION<br>M60-P50<br>No.15 RIGHT POS.<br>M60-P50<br><br>No.17 V POSITION<br>M60-P60<br>No.18 LOWER POS.<br>M60-P60<br>No.19 H POSITION<br>M60-P60<br>No.20 RIGHT POS.<br>M60-P60 | <div>1. Input a black and white signal (color off) to both MAIN and PIP screen as shown in the table below.</div> <div>2. Select "No.2 V POSITION" of the PIP mode in SERVICE MENU.</div> <div>3. Confirm the initial setting value of the "No.2 V POSITION".</div> <div>4. Adjust the "No.2 V POSITION" so that the position of the PIP screen edge of upper will be at X1 as shown in the table below.</div> <div>5. Adjust the corresponding modes of "No.3, No.4, No.5" with the same steps as 2 ~ 4 above.</div> <div>6. Then change the input signal combination of the MAIN and PIP screen as shown in the table below, and adjust same step as 3 ~ 5.</div> |             |            |                     |              |              |              |                                |                     |    |                                |                     |    |                                |                   |    |                                 |                     |    |
|   |                      |                     | <table><tr><th>STEP</th><th>MAIN SCREEN</th><th>PIP SCREEN</th></tr><tr><td>①</td><td>PAL-N [50Hz]</td><td>PAL-N [50Hz]</td></tr><tr><td>②</td><td>PAL-N [50Hz]</td><td>NTSC/PAL-M [60Hz]</td></tr><tr><td>③</td><td>NTSC/PAL-M [60Hz]</td><td>PAL-M [50Hz]</td></tr><tr><td>④</td><td>NTSC/PAL-M [60Hz]</td><td>NTSC/PAL-M [60Hz]</td></tr></table>  | STEP  | MAIN SCREEN | PIP SCREEN | ①                   | PAL-N [50Hz] | PAL-N [50Hz] | ②            | PAL-N [50Hz]                   | NTSC/PAL-M [60Hz]   | ③  | NTSC/PAL-M [60Hz]              | PAL-M [50Hz]        | ④  | NTSC/PAL-M [60Hz]              | NTSC/PAL-M [60Hz] |    |                                 |                     |    |
| STEP  | MAIN SCREEN          | PIP SCREEN          |   |   |             |            |                     |              |              |              |                                |                     |    |                                |                     |    |                                |                   |    |                                 |                     |    |
| ①   | PAL-N [50Hz]         | PAL-N [50Hz]        |   |   |             |            |                     |              |              |              |                                |                     |    |                                |                     |    |                                |                   |    |                                 |                     |    |
| ②   | PAL-N [50Hz]         | NTSC/PAL-M [60Hz]   |   |   |             |            |                     |              |              |              |                                |                     |    |                                |                     |    |                                |                   |    |                                 |                     |    |
| ③   | NTSC/PAL-M [60Hz]    | PAL-M [50Hz]        |   |   |             |            |                     |              |              |              |                                |                     |    |                                |                     |    |                                |                   |    |                                 |                     |    |
| ④   | NTSC/PAL-M [60Hz]    | NTSC/PAL-M [60Hz]   |   |   |             |            |                     |              |              |              |                                |                     |    |                                |                     |    |                                |                   |    |                                 |                     |    |
| <div><div><div>PIP screen</div><div><div><div></div><div></div><div></div><div></div></div><div>X1</div><div>X2</div><div>Y1</div><div>Y2</div></div></div></div> |                      |                     |   |   |             |            |                     |              |              |              |                                |                     |    |                                |                     |    |                                |                   |    |                                 |                     |    |
|   |                      |                     |   | <table><tr><th></th><th></th><th>PIP SETING POSITION</th></tr><tr><th></th><th></th><th>Approx. (mm)</th></tr><tr><td>No.2<br/>No.7<br/>No.12<br/>No.17</td><td>UPPER POSITION (X1)</td><td>40</td></tr><tr><td>No.3<br/>No.8<br/>No.13<br/>No.17</td><td>LOWER POSITION (X2)</td><td>40</td></tr><tr><td>No.4<br/>No.9<br/>No.14<br/>No.19</td><td>H POSITION (Y1)</td><td>50</td></tr><tr><td>No.5<br/>No.10<br/>No.15<br/>No.20</td><td>RIGHT POSITION (Y2)</td><td>50</td></tr></table>   |             |            | PIP SETING POSITION |              |              | Approx. (mm) | No.2<br>No.7<br>No.12<br>No.17 | UPPER POSITION (X1) | 40 | No.3<br>No.8<br>No.13<br>No.17 | LOWER POSITION (X2) | 40 | No.4<br>No.9<br>No.14<br>No.19 | H POSITION (Y1)   | 50 | No.5<br>No.10<br>No.15<br>No.20 | RIGHT POSITION (Y2) | 50 |
|   |                      | PIP SETING POSITION |   |   |             |            |                     |              |              |              |                                |                     |    |                                |                     |    |                                |                   |    |                                 |                     |    |
|   |                      | Approx. (mm)        |   |   |             |            |                     |              |              |              |                                |                     |    |                                |                     |    |                                |                   |    |                                 |                     |    |
| No.2<br>No.7<br>No.12<br>No.17  | UPPER POSITION (X1)  | 40                  |   |   |             |            |                     |              |              |              |                                |                     |    |                                |                     |    |                                |                   |    |                                 |                     |    |
| No.3<br>No.8<br>No.13<br>No.17  | LOWER POSITION (X2)  | 40                  |   |   |             |            |                     |              |              |              |                                |                     |    |                                |                     |    |                                |                   |    |                                 |                     |    |
| No.4<br>No.9<br>No.14<br>No.19  | H POSITION (Y1)      | 50                  |   |   |             |            |                     |              |              |              |                                |                     |    |                                |                     |    |                                |                   |    |                                 |                     |    |
| No.5<br>No.10<br>No.15<br>No.20   | RIGHT POSITION (Y2)  | 50                  |   |   |             |            |                     |              |              |              |                                |                     |    |                                |                     |    |                                |                   |    |                                 |                     |    |

| Item                               | Measuring instrument | Test point | Adjustment item                       | Description  |
|------------------------------------|----------------------|------------|---------------------------------------|--|
| <b>PIP SUB CONTRAST adjustment</b> |                      |            | <b>No.63 CONT2</b>                    | <ol style="list-style-type: none"> <li>1. Receive a broadcast to both MAIN and PIP screen.</li> <li>2. Select "No.63 CONT2" of the PIP mode in the SERVICE MENU.</li> <li>3. Confirm the initial setting value of the "No.63 CONT2".</li> <li>4. If the contrast of the PIP screen is not the best with initial setting value, and too difficult during MAIN screen contrast, make fine adjustment of the "No.63 CONT2" until getting the optimum contrast.</li> </ol> |
| <b>PIP SUB COLOR adjustment</b>    |                      |            | <b>No.65 COLOR2</b>                   | <ol style="list-style-type: none"> <li>1. Receive a broadcast to both MAIN and PIP screen.</li> <li>2. Select "No.65 COLOR2" of the PIP mode in the SERVICE MENU.</li> <li>3. Confirm the initial setting value of the "No.65 COLOR2".</li> <li>4. If the color of the PIP screen is not the best with initial setting value, and too difficult during MAIN screen color, make fine adjustment of the "No.65 COLOR2" until getting the optimum color.</li> </ol>       |
| <b>PIP SUB TINT adjustment</b>     |                      |            | <b>No.64 TINT</b>                     | <ol style="list-style-type: none"> <li>1. Receive a broadcast to both MAIN and PIP screen.</li> <li>2. Select "No.64 TINT" of the PIP mode in the SERVICE MENU.</li> <li>3. Confirm the initial setting value of the "No.64 TINT".</li> <li>4. If the tint of the PIP screen is not the best with the initial setting value, and too difficult during the MAIN screen tint, make fine adjustment of the "No.64 TINT" until getting the optimum tint.</li> </ol>        |
| <b>PIP RF AGC Adjustment</b>       |                      |            | <b>PIP NOISE VR [AV SELECTOR PWB]</b> | <ol style="list-style-type: none"> <li>1. Receive a broadcast to both MAIN and PIP screen.</li> <li>2. Turn the PIP NOISE VR to get noise on the picture.</li> <li>3. Then turn the PIP NOISE VR counter direction, and stop where noise disappears on the picture.</li> </ol>   |

## ADJUSTMENT OF MTS CIRCUIT

| Item                      | Measuring instrument                  | Test point  | Adjustment part                | Description  |
|---------------------------|---------------------------------------|---|--------------------------------|--|
| MTS INPUT LEVEL check     |                                       |   | No.2 IN LEVEL                  | <ol style="list-style-type: none"> <li>1. Select the "No.2 IN LEVEL" of the SOUND mode in SERVICE MENU.</li> <li>2. Verify that the "No.2 IN LEVEL" is set at its initial setting value.</li> </ol>  |
| MTS STEREO VCO adjustment | Signal generator<br>Frequency counter | MPX Connector<br>2 pin TVR<br>[AV SELECTOR PWB]                           | No.3 FH MON.<br>No.4 ST. VCO   | <ol style="list-style-type: none"> <li>1. Receive a RF signal (non modulated sound signal) from the antenna terminal.</li> <li>2. Select the "No.3 FH MON." of SOUND mode in SERVICE MENU, change the setting value from 0 to 1.</li> <li>3. Connect the frequency connector to pin 2 of MPX connector.</li> <li>4. Select the "No.4 ST. VCO".</li> <li>5. Confirm the initial setting value of the "No.4 ST. VCO".</li> <li>6. Adjust the "No.4 ST. VCO" so that the frequency counter will display <math>15.73\text{kHz} \pm 0.1\text{kHz}</math>.</li> <li>7. Select the "No.3 FH MON." of the SOUND mode, and reset the setting value from 1 to 0.</li> </ol>  |
| MTS SAP VCO adjustment    | Signal generator<br>Frequency counter | MPX Connector<br>4 pin SDA<br>3 pin GND<br>2 pin TVR<br>[AV SELECTOR PWB] | No.3 FH MON.<br>No.10 SAP VCO. | <ol style="list-style-type: none"> <li>1. Receive a RF signal (non modulated sound signal) from the antenna terminal.</li> <li>2. Connect between pin 4 of MPX connector and GND (pin 3 of MPX connector) through <math>1\text{M}\Omega</math> resistor.</li> <li>3. Select the "No.3 FH MON." of the SOUND mode in SERVICE MENU, and reset the setting value from 0 to 1.</li> <li>4. Connect the frequency counter to pin 2 (R.OUT) of MPX connector.</li> <li>5. Select the "No.10 SAP VCO".</li> <li>6. Confirm the initial setting value of "No.10 SAP VCO".</li> <li>7. Adjust the "No.10 SAP VCO" so that the frequency counter will display <math>78.67\text{kHz} \pm 0.5\text{kHz}</math>.</li> <li>8. Select the "No.3 FH MON." of the SOUND mode, and reset the setting value from 1 to 0.</li> </ol> |
| MTS FILTER check          |                                       |   | No.6 FILTER                    | <ol style="list-style-type: none"> <li>1. Select the "No.6 FLTER" of the SOUND mode in SERVICE MENU.</li> <li>2. Verify that the "No.6 FLTER" is set at its initial setting value.</li> </ol>  |



| Item  | Measuring instrument                                    | Test point   | Adjustment part                   | Description  |
|---|---|--|-----------------------------------|--|
| MTS SEPARATION adjustment   | TV audio multiplex signal generator<br><br>Oscilloscope | MPX Connector<br>1 pin TVL<br>2 pin TVR<br>[AV SELECTOR PWB] | No.7 LOW SEP.<br><br>No.8 HI SEP. | <ol style="list-style-type: none"> <li>1. Input a stereo L signal (300Hz) from the TV Audio multiplex signal generator to the antenna terminal.</li> <li>2. Connect an oscilloscope to pin 1 (L.OUT) of MPX connector, and display one cycle portion of the 300Hz signal.</li> <li>3. Change the connection of the oscilloscope to pin 2 (R.OUT) of MPX connector, and enlarge the voltage axis.</li> <li>4. Select the "No.7 LOW SEP." of the SOUND mode in SERVICE MENU.</li> <li>5. Confirm the initial setting value of the "No.7 LOW SEP.".</li> <li>6. Adjust the "No.7 LOW SEP." so that the stroke element of the 300Hz signal will become minimum.</li> <li>7. Change the signal to 3kHz, and similarly adjust the "No.8 HI SEP.".</li> </ol> |
| <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>L-Channel<br/>signal waveform</p>  <p>1 cycle</p> </div> <div style="text-align: center;"> <p>R-Channel<br/>crosstalk portion</p>  <p>Minimum</p> </div> </div> |   |  |                                   |  |

# HOW TO CHECK THE HIGH VOLTAGE HOLD DOWN CIRCUIT

## 1. HIGH VOLTAGE HOLD DOWN CIRCUIT

After repairing the high voltage hold down circuit shown in Fig. 1.

This circuit shall be checked to operate correctly.

## 2. CHECKING OF THE HIGH VOLTAGE HOLD DOWN CIRCUIT

- (1) Turn the POWER SW ON.
- (2) As shown in Fig.2, set the resistor (between ☐ connector 1 & 3 ).
- (3) Make sure that the screen picture disappears.
- (4) Temporarily unplug the power plug.
- (5) Remove the resistor (between ☐ connector 1 & 3 ).
- (6) Again plug the power plug, make sure that the normal picture is displayed on the screen.

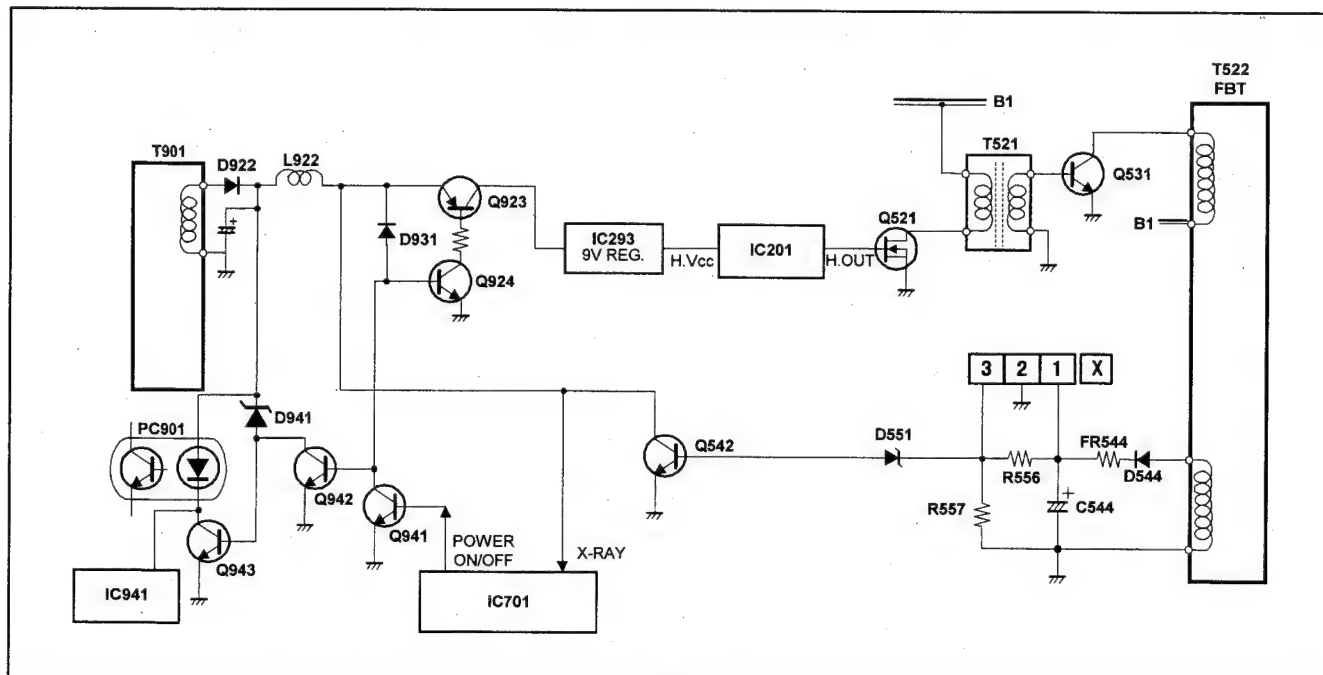


Fig. 1

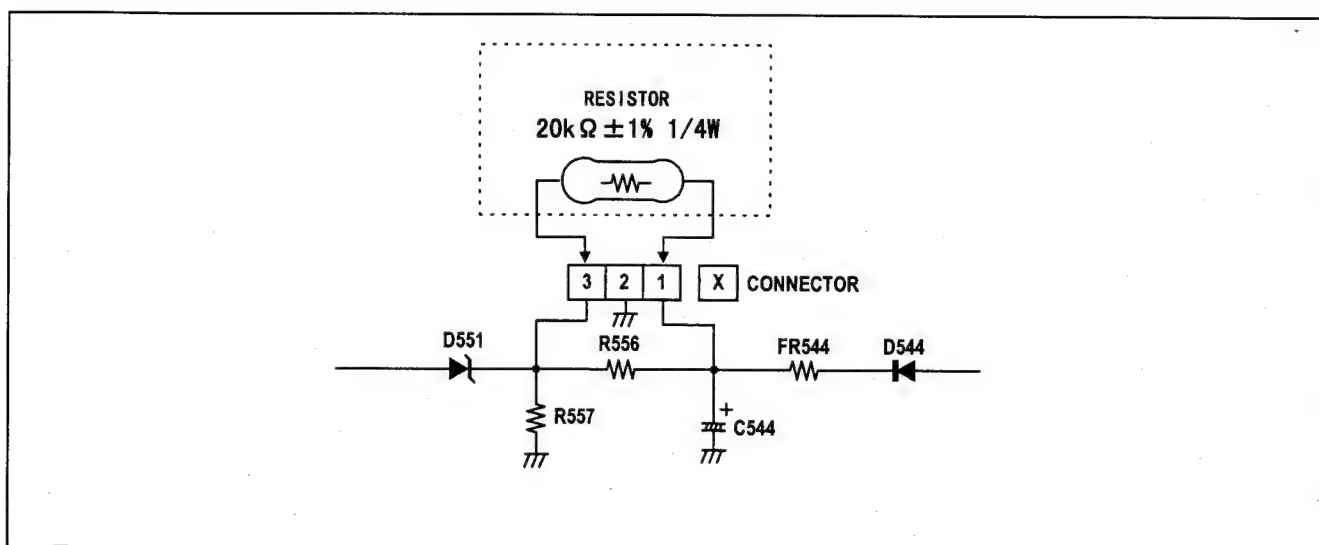


Fig.2

# PARTS LIST

## CAUTION

- The parts identified by the  $\triangle$  symbol are important for the safety. Whenever replacing these parts, be sure to use specified ones to secure the safety.
- The parts not indicated in this Parts List and those which are filled with lines — in the Parts No. columns will not be supplied.
- P. W. Board Ass'y will not be supplied, but those which are filled with the Parts No. in the Parts No. columns will be supplied.

## ABBREVIATIONS OF RESISTORS, CAPACITORS AND TOLERANCES

| RESISTORS |  | CAPACITORS      |   |
|-----------|--|-----------------|---|
| C R       | Carbon Resistor                                  | C CAP.          | Ceramic Capacitor                             |
| F R       | Fusible Resistor                                 | E CAP.          | Electrolytic Capacitor                        |
| P R       | Plate Resistor                                   | M CAP.          | Mylar Capacitor                               |
| V R       | Variable Resistor                                | HV CAP.         | High Voltage Capacitor                        |
| HV R      | High Voltage Resistor                            | MF CAP.         | Metalized Film Capacitor                      |
| MF R      | Metal Film Resistor                              | MM CAP.         | Metalized Mylar Capacitor                     |
| MG R      | Metal Glazed Resistor                            | MP CAP.         | Metalized Polystyrol Capacitor                |
| MP R      | Metal Plate Resistor                             | PP CAP.         | Polypropylene Capacitor                       |
| OM R      | Metal Oxide Film Resistor                        | PS CAP.         | Polystyrol Capacitor                          |
| CMF R     | Coating Metal Film Resistor                      | TF CAP.         | Thin Film Capacitor                           |
| UNF R     | Non-Flammable Resistor                           | MPP CAP.        | Metalized Polypropylene Capacitor             |
| CH V R    | Chip Variable Resistor                           | TAN. CAP.       | Tantalum Capacitor                            |
| CH MG R   | Chip Metal Glazed Resistor                       | CH C CAP.       | Chip Ceramic Capacitor                        |
| COMP. R   | Composition Resistor                             | BP E CAP.       | Bi-Polar Electrolytic Capacitor               |
| LPTC R    | Linear Positive Temperature Coefficient Resistor | CH AL E CAP.    | Chip Aluminum Electrolytic Capacitor          |
|           |  | CH AL BP CAP.   | Chip Aluminum Bi-Polar Capacitor              |
|           |  | CH TAN. E CAP.  | Chip Tantalum Electrolytic Capacitor          |
|           |  | CH AL BP E CAP. | Chip Tantalum Bi-Polar Electrolytic Capacitor |

| TOLERANCES |     |     |      |      |      |      |      |      |       |
|------------|-----|-----|------|------|------|------|------|------|-------|
| F          | G   | J   | K    | M    | N    | R    | H    | Z    | P     |
| ±1%        | ±2% | ±5% | ±10% | ±20% | ±30% | +30% | +50% | +80% | +100% |
|            |     |     |      |      |      | -10% | -10% | -20% | -0%   |

## CONTENTS

|                                      |    |
|--------------------------------------|----|
| REMOTE CONTROL UNIT PARTS LIST ..... | 34 |
| EXPLODED VIEW PARTS LIST .....       | 34 |
| EXPLODED VIEW .....                  | 35 |
| PRINTED WIRING BOARD PARTS LIST      |    |
| MAIN PW BOARD ASS'Y .....            | 36 |
| CRT SOCKET PW BOARD ASS'Y .....      | 40 |
| FRONT CONTROL PW BOARD ASS'Y .....   | 41 |
| AV SELECTOR PW BOARD ASS'Y .....     | 41 |
| FRONT AV JACK PW BOARD ASS'Y .....   | 43 |
| LINE FILTER PW BOARD ASS'Y .....     | 43 |
| PIP PW BOARD ASS'Y .....             | 43 |
| SIDE PIN PW BOARD ASS'Y .....        | 45 |
| PACKING / PACKING PARTS LIST .....   | 46 |

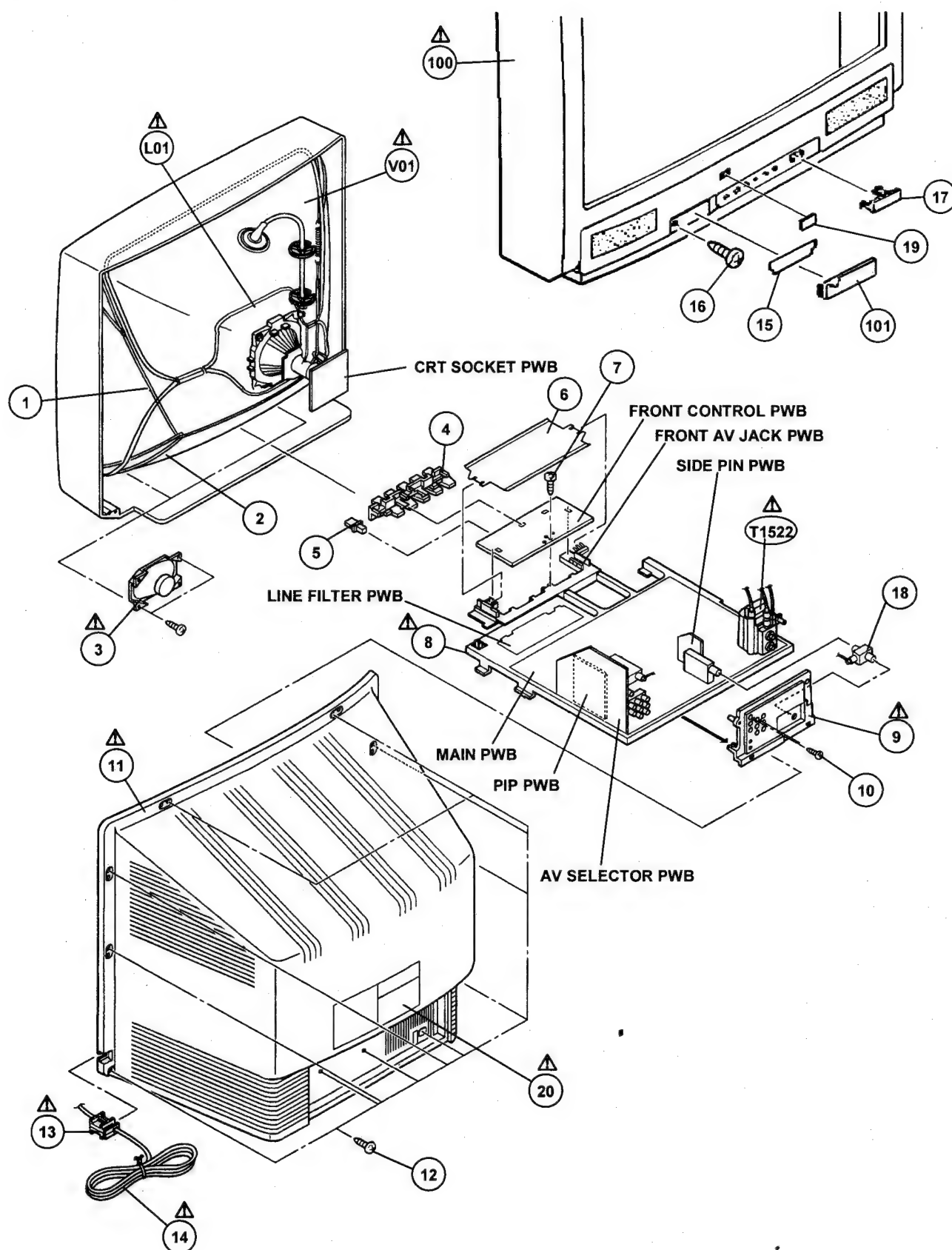
## REMOTE CONTROL UNIT PARTS LIST (RM-C735-1A)

| △ Ref.No. | Part No.        | Part Name     | Description | Local |
|-----------|-----------------|---------------|-------------|-------|
|           | 103RRC-049-01AR | BATTERY COVER |             |       |

## EXPLODED VIEW PARTS LIST

| △ Ref.No. | Part No.        | Part Name        | Description   | Local |
|-----------|-----------------|------------------|---------------|-------|
| △ V01     | A90AFX15X071    | ITC TUBE(C)      | Inc.DY        | *     |
| △ L01     | CELD059-002J3   | DEGAUSSING COIL  | (×2)          | *     |
| △ T1522   | QQH0025-001     | FBT              |               | *     |
| 1         | CHGB0027-0A     | BRAIDED ASSY     |               | *     |
| 2         | CHGB0016-0C     | BRAIDED WIRE     | (×2)          | *     |
| △ 3       | CEB5512D-02J2   | SPEAKER          | (×2)SP01,SP02 | *     |
| 4         | CM35776-A03-H   | PUSH KNOB        |               | *     |
| 5         | CM36273-A01-H   | POWER KNOB       |               | *     |
| 6         | CM36634-A01-H   | PROTECTOR        |               | *     |
| 7         | QYSB5BG3010Z    | TAPPING SCREW    |               | *     |
| △ 8       | CM12985-001-VA  | CHASSIS BASE     |               | *     |
| △ 9       | LC20306-002A-VA | TERMINAL BOARD   |               | *     |
| 10        | QYSB5B3010Z     | TAPPING SCREW    | (×2)          | *     |
| △ 11      | CM12634-004-MA  | REAR COVER       |               | *     |
| 12        | QYSB5FG4016Z    | TAPPING SCREW    | (×11)         | *     |
| △ 13      | CM23169-001-A   | POWER CORD CLAMP |               | *     |
| △ 14      | QMPR030-200-JC  | POWER CORD       |               | *     |
| 15        | CM48272-001-A   | SHEET            |               | *     |
| 16        | QYSDB3010M      | TAPPING SCREW    |               | *     |
| 17        | CM35983-001-H   | REMOCON WINDOW   |               | *     |
| 18        | CEGA008-001     | ANTENNA SPLITTER |               | *     |
| 19        | CM46084-A01     | BRAND MARK       |               | *     |
| △ 20      | LC31044-002A-A  | RATING LABEL     |               | *     |
| △ 100     | CM12747-00N-MA  | FRONT CABINET    | Inc.No.101    | *     |
| 101       | CM36162-005-A   | DOOR             |               | *     |

## EXPLODED VIEW



PRINTED WIRING BOARD PARTS LIST

MAIN P.W. BOARD ASS'Y (SGB-1009A-M2)

| Symbol No.        | Part No.     | Part Name         | Description   | Local |
|-------------------|--------------|-------------------|---------------|-------|
| VARIABLE RESISTOR |              |                   |               |       |
| R1135             | QVP0067-501Z | V R(DET LEVEL VR) | 500Ω          | *     |
| RESISTOR          |              |                   |               |       |
| R1001             | NRSA02J-563X | MG R              | 56kΩ 1/10W J  | *     |
| Δ R1005           | QRZ9017-4R7  | FUSI. RESISTOR    | 4.7 Ω 1/4W J  | *     |
| R1006             | NRSA02J-820X | MG R              | 82Ω 1/10W J   | *     |
| R1101             | NRSA02J-562X | MG R              | 5.6kΩ 1/10W J | *     |
| R1102             | NRSA02J-182X | MG R              | 1.8kΩ 1/10W J | *     |
| R1103             | QRE121J-101Y | C R               | 100Ω 1/2W J   | *     |
| R1104             | NRSA02J-180X | MG R              | 18Ω 1/10W J   | *     |
| R1105             | NRSA02J-270X | MG R              | 27Ω 1/10W J   | *     |
| R1111             | NRSA02J-394X | MG R              | 390kΩ 1/10W J | *     |
| R1112             | NRSA02J-334X | MG R              | 330kΩ 1/10W J | *     |
| R1113             | NRSA02J-101X | MG R              | 100Ω 1/10W J  | *     |
| R1116             | NRSA02J-680X | MG R              | 68Ω 1/10W J   | *     |
| R1131             | NRSA02J-102X | MG R              | 1kΩ 1/10W J   | *     |
| R1132             | NRSA02J-471X | MG R              | 470Ω 1/10W J  | *     |
| R1133             | NRSA02J-102X | MG R              | 1kΩ 1/10W J   | *     |
| R1134             | NRSA02J-0R0X | MG R              | 0.0Ω 1/10W J  | *     |
| R1136             | NRSA02J-271X | MG R              | 270Ω 1/10W J  | *     |
| R1161             | NRSA02J-332X | MG R              | 3.3kΩ 1/10W J | *     |
| R1162             | NRSA02J-0R0X | MG R              | 0.0Ω 1/10W J  | *     |
| R1163             | NRSA02J-103X | MG R              | 10kΩ 1/10W J  | *     |
| R1164             | NRSA02J-102X | MG R              | 1kΩ 1/10W J   | *     |
| R1165             | NRSA02J-273X | MG R              | 27kΩ 1/10W J  | *     |
| R1166             | NRSA02J-103X | MG R              | 10kΩ 1/10W J  | *     |
| R1167             | NRSA02J-102X | MG R              | 1kΩ 1/10W J   | *     |
| R1168             | NRSA02J-101X | MG R              | 100Ω 1/10W J  | *     |
| R1169             | NRSA02J-561X | MG R              | 560Ω 1/10W J  | *     |
| R1170             | NRSA02J-123X | MG R              | 12kΩ 1/10W J  | *     |
| R1201             | NRSA02J-181X | MG R              | 180Ω 1/10W J  | *     |
| R1202             | NRSA02J-271X | MG R              | 270Ω 1/10W J  | *     |
| R1203             | NRSA02J-821X | MG R              | 820Ω 1/10W J  | *     |
| R1204             | NRSA02J-681X | MG R              | 680Ω 1/10W J  | *     |
| R1205             | NRSA02J-152X | MG R              | 1.5kΩ 1/10W J | *     |
| R1213             | NRSA02J-391X | MG R              | 390Ω 1/10W J  | *     |
| R1215             | NRSA02J-824X | MG R              | 820kΩ 1/10W J | *     |
| R1216             | NRSA02J-0R0X | MG R              | 0.0Ω 1/10W J  | *     |
| R1217             | NRSA02J-564X | MG R              | 560kΩ 1/10W J | *     |
| R1220             | NRSA02J-471X | MG R              | 470Ω 1/10W J  | *     |
| R1231             | NRSA02J-332X | MG R              | 3.3kΩ 1/10W J | *     |
| R1232             | NRSA02J-183X | MG R              | 18kΩ 1/10W J  | *     |
| R1233             | NRSA02J-182X | MG R              | 1.8kΩ 1/10W J | *     |
| R1234             | NRSA02J-0R0X | MG R              | 0.0Ω 1/10W J  | *     |
| R1235             | NRSA02J-472X | MG R              | 4.7kΩ 1/10W J | *     |
| R1236             | NRSA02J-0R0X | MG R              | 0.0Ω 1/10W J  | *     |
| R1292             | QRL029J-220  | OM R              | 22Ω 2W J      | *     |
| R1293             | QRX016J-1R0  | MF R              | 1.0Ω 1W J     | *     |
| R1301             | NRSA02J-221X | MG R              | 220Ω 1/10W J  | *     |
| R1302             | NRSA02J-331X | MG R              | 330Ω 1/10W J  | *     |
| R1303-04          | NRSA02J-223X | MG R              | 22kΩ 1/10W J  | *     |
| R1305-07          | NRSA02J-0R0X | MG R              | 0.0Ω 1/10W J  | *     |
| R1308             | NRSA02J-392X | MG R              | 3.9kΩ 1/10W J | *     |
| R1309             | NRSA02J-103X | MG R              | 10kΩ 1/10W J  | *     |
| R1311             | NRSA02J-273X | MG R              | 27kΩ 1/10W J  | *     |
| R1312             | NRSA02J-0R0X | MG R              | 0.0Ω 1/10W J  | *     |
| R1314             | NRSA02J-0R0X | MG R              | 0.0Ω 1/10W J  | *     |
| R1316-18          | NRSA02J-472X | MG R              | 4.7kΩ 1/10W J | *     |
| R1319             | NRSA02J-184X | MG R              | 180kΩ 1/10W J | *     |
| R1351             | NRSA02J-102X | MG R              | 1kΩ 1/10W J   | *     |
| R1352             | NRSA02J-0R0X | MG R              | 0.0Ω 1/10W J  | *     |
| R1391             | QRJ146J-180X | C R               | 18Ω 1/4W J    | *     |
| R1401             | NRSA02J-103X | MG R              | 10kΩ 1/10W J  | *     |

| Symbol No. | Part No.      | Part Name | Description   | Local |
|------------|---------------|-----------|---------------|-------|
| RESISTOR   |               |           |               |       |
| R1402      | NRSA02J-682X  | MG R      | 6.8kΩ 1/10W J | *     |
| R1407      | NRSA02J-562X  | MG R      | 5.6kΩ 1/10W J | *     |
| R1408      | NRSA02J-472X  | MG R      | 4.7kΩ 1/10W J | *     |
| R1413      | QRE121J-391Y  | C R       | 390Ω 1/2W J   | *     |
| R1414      | QRT029J-1R0   | MF R      | 1.0Ω 2W J     | *     |
| R1416      | NRSA02J-223X  | MG R      | 22kΩ 1/10W J  | *     |
| R1418      | NRSA02J-223X  | MG R      | 22kΩ 1/10W J  | *     |
| R1419      | NRSA02J-822X  | MG R      | 8.2kΩ 1/10W J | *     |
| R1421      | NRSA02J-0R0X  | MG R      | 0.0Ω 1/10W J  | *     |
| R1422      | NRSA02J-562X  | MG R      | 5.6kΩ 1/10W J | *     |
| R1431      | NRSA02J-102X  | MG R      | 1kΩ 1/10W J   | *     |
| R1432      | NRSA02J-183X  | MG R      | 18kΩ 1/10W J  | *     |
| R1433      | NRSA02J-223X  | MG R      | 22kΩ 1/10W J  | *     |
| R1434      | NRSA02J-103X  | MG R      | 10kΩ 1/10W J  | *     |
| R1501      | NRSA02J-0R0X  | MG R      | 0.0Ω 1/10W J  | *     |
| R1503      | NRSA02J-103X  | MG R      | 10kΩ 1/10W J  | *     |
| R1504      | NRSA02J-104X  | MG R      | 100kΩ 1/10W J | *     |
| R1505      | NRSA02J-822X  | MG R      | 8.2kΩ 1/10W J | *     |
| R1521      | NRSA02J-621X  | MG R      | 620Ω 1/10W J  | *     |
| R1522      | NRSA02J-222X  | MG R      | 2.2kΩ 1/10W J | *     |
| R1523      | QRE121J-103Y  | C R       | 10kΩ 1/2W J   | *     |
| R1524      | QRL039J-122   | OM R      | 1.2kΩ 3W J    | *     |
| R1525      | QRL039J-152   | OM R      | 1.5kΩ 3W J    | *     |
| Δ R1531    | QRE121J-220Y  | C R       | 22Ω 1/2W J    | *     |
| R1532      | QRE121J-681Y  | C R       | 680Ω 1/2W J   | *     |
| R1533      | QRL039J-103   | OM R      | 10kΩ 3W J     | *     |
| R1543      | QRL039J-153   | OM R      | 15kΩ 3W J     | *     |
| R1547-48   | QRE121J-154Y  | C R       | 150kΩ 1/2W J  | *     |
| R1553      | NRSA02J-104X  | MG R      | 100kΩ 1/10W J | *     |
| Δ R1556    | QRA14CF-7321Y | MF R      | 7.32kΩ 1/4W F | *     |
| Δ R1557    | QRA14CF-2741Y | MF R      | 2.74kΩ 1/4W F | *     |
| R1558      | NRSA02J-103X  | MG R      | 10kΩ 1/10W J  | *     |
| R1560      | NRSA02J-333X  | MG R      | 33kΩ 1/10W J  | *     |
| R1582      | QRE121J-152Y  | C R       | 1.5kΩ 1/2W J  | *     |
| R1583      | QRE121J-123Y  | C R       | 12kΩ 1/2W J   | *     |
| R1584      | NRSA02J-0R0X  | MG R      | 0.0Ω 1/10W J  | *     |
| R1585      | NRSA02J-102X  | MG R      | 1kΩ 1/10W J   | *     |
| R1586      | QRE121J-183Y  | C R       | 18kΩ 1/2W J   | *     |
| R1587      | NRSA02J-102X  | MG R      | 1kΩ 1/10W J   | *     |
| R1588      | QRL039J-100   | OM R      | 10Ω 3W J      | *     |
| R1589      | QRE141J-0R0Y  | C R       | 0.0Ω 1/4W J   | *     |
| R1603      | NRSA02J-682X  | MG R      | 6.8kΩ 1/10W J | *     |
| R1605      | NRSA02J-821X  | MG R      | 820Ω 1/10W J  | *     |
| R1607      | NRSA02J-682X  | MG R      | 6.8kΩ 1/10W J | *     |
| R1609      | NRSA02J-821X  | MG R      | 820Ω 1/10W J  | *     |
| R1611      | NRSA02J-223X  | MG R      | 22kΩ 1/10W J  | *     |
| R1613      | NRSA02J-333X  | MG R      | 33kΩ 1/10W J  | *     |
| R1620      | NRSA02J-183X  | MG R      | 18kΩ 1/10W J  | *     |
| R1622      | NRSA02J-183X  | MG R      | 18kΩ 1/10W J  | *     |
| R1626      | NRSA02J-822X  | MG R      | 8.2kΩ 1/10W J | *     |
| R1631      | NRSA02J-473X  | MG R      | 47kΩ 1/10W J  | *     |
| R1701      | NRSA02J-562X  | MG R      | 5.6kΩ 1/10W J | *     |
| R1702      | NRSA02J-223X  | MG R      | 22kΩ 1/10W J  | *     |
| R1703      | NRSA02J-0R0X  | MG R      | 0.0Ω 1/10W J  | *     |
| R1704      | NRSA02J-472X  | MG R      | 4.7kΩ 1/10W J | *     |
| R1705      | NRSA02J-102X  | MG R      | 1kΩ 1/10W J   | *     |
| R1706      | NRSA02J-563X  | MG R      | 56kΩ 1/10W J  | *     |
| R1707      | NRSA02J-103X  | MG R      | 10kΩ 1/10W J  | *     |
| R1708      | NRSA02J-0R0X  | MG R      | 0.0Ω 1/10W J  | *     |
| R1709      | NRSA02J-472X  | MG R      | 4.7kΩ 1/10W J | *     |
| R1710      | NRSA02J-102X  | MG R      | 1kΩ 1/10W J   | *     |
| R1711      | NRSA02J-124X  | MG R      | 120kΩ 1/10W J | *     |
| R1712      | NRSA02J-184X  | MG R      | 180kΩ 1/10W J | *     |
| R1713      | NRSA02J-102X  | MG R      | 1kΩ 1/10W J   | *     |

| Symbol No.      | Part No.     | Part Name | Description   | Local |
|-----------------|--------------|-----------|---------------|-------|
| <b>RESISTOR</b> |              |           |               |       |
| R1714           | NRSA02J-103X | MG R      | 10kΩ 1/10W J  | *     |
| R1715           | NRSA02J-224X | MG R      | 220kΩ 1/10W J | *     |
| R1716-17        | NRSA02J-102X | MG R      | 1kΩ 1/10W J   | *     |
| R1718           | NRSA02J-333X | MG R      | 33kΩ 1/10W J  | *     |
| R1721           | NRSA02J-102X | MG R      | 1kΩ 1/10W J   | *     |
| R1722           | NRSA02J-561X | MG R      | 560Ω 1/10W J  | *     |
| R1724           | NRSA02J-221X | MG R      | 220Ω 1/10W J  | *     |
| R1725           | NRSA02J-682X | MG R      | 6.8kΩ 1/10W J | *     |
| R1726           | NRSA02J-221X | MG R      | 220Ω 1/10W J  | *     |
| R1727           | NRSA02J-682X | MG R      | 6.8kΩ 1/10W J | *     |
| R1728           | NRSA02J-221X | MG R      | 220Ω 1/10W J  | *     |
| R1729           | NRSA02J-682X | MG R      | 6.8kΩ 1/10W J | *     |
| R1730           | NRSA02J-221X | MG R      | 220Ω 1/10W J  | *     |
| R1731-32        | NRSA02J-682X | MG R      | 6.8kΩ 1/10W J | *     |
| R1734           | NRSA02J-102X | MG R      | 1kΩ 1/10W J   | *     |
| R1735-36        | NRSA02J-473X | MG R      | 47kΩ 1/10W J  | *     |
| R1737           | NRSA02J-683X | MG R      | 68kΩ 1/10W J  | *     |
| R1738           | NRSA02J-682X | MG R      | 6.8kΩ 1/10W J | *     |
| R1740           | NRSA02J-101X | MG R      | 100Ω 1/10W J  | *     |
| R1741           | NRSA02J-103X | MG R      | 10kΩ 1/10W J  | *     |
| R1742           | NRSA02J-102X | MG R      | 1kΩ 1/10W J   | *     |
| R1743           | NRSA02J-392X | MG R      | 3.9kΩ 1/10W J | *     |
| R1744           | NRSA02J-102X | MG R      | 1kΩ 1/10W J   | *     |
| R1745           | NRSA02J-392X | MG R      | 3.9kΩ 1/10W J | *     |
| R1746           | NRSA02J-102X | MG R      | 1kΩ 1/10W J   | *     |
| R1747           | NRSA02J-392X | MG R      | 3.9kΩ 1/10W J | *     |
| R1748-49        | NRSA02J-102X | MG R      | 1kΩ 1/10W J   | *     |
| R1750-52        | NRSA02J-0R0X | MG R      | 0.0Ω 1/10W J  | *     |
| R1753           | NRSA02J-103X | MG R      | 10kΩ 1/10W J  | *     |
| R1754-55        | NRSA02J-222X | MG R      | 2.2kΩ 1/10W J | *     |
| R1756           | NRSA02J-122X | MG R      | 1.2kΩ 1/10W J | *     |
| R1757           | NRSA02J-102X | MG R      | 1kΩ 1/10W J   | *     |
| R1758           | NRSA02J-105X | MG R      | 1MΩ 1/10W J   | *     |
| R1761           | NRSA02J-102X | MG R      | 1kΩ 1/10W J   | *     |
| R1762           | NRSA02J-153X | MG R      | 15kΩ 1/10W J  | *     |
| R1764           | NRSA02J-105X | MG R      | 1MΩ 1/10W J   | *     |
| R1765           | NRSA02J-683X | MG R      | 68kΩ 1/10W J  | *     |
| R1766           | NRSA02J-104X | MG R      | 100kΩ 1/10W J | *     |
| R1771-72        | NRSA02J-221X | MG R      | 220Ω 1/10W J  | *     |
| R1781           | NRSA02J-682X | MG R      | 6.8kΩ 1/10W J | *     |
| R1784           | NRSA02J-563X | MG R      | 56kΩ 1/10W J  | *     |
| R1785           | NRSA02J-223X | MG R      | 22kΩ 1/10W J  | *     |
| R1786           | NRSA02J-0R0X | MG R      | 0.0Ω 1/10W J  | *     |
| R1787           | NRSA02J-103X | MG R      | 10kΩ 1/10W J  | *     |
| R1788           | NRSA02J-563X | MG R      | 56kΩ 1/10W J  | *     |
| R1789           | NRSA02J-103X | MG R      | 10kΩ 1/10W J  | *     |
| R1790           | NRSA02J-0R0X | MG R      | 0.0Ω 1/10W J  | *     |
| R1791           | NRSA02J-103X | MG R      | 10kΩ 1/10W J  | *     |
| R1792           | NRSA02J-472X | MG R      | 4.7kΩ 1/10W J | *     |
| R1793-97        | NRSA02J-561X | MG R      | 560Ω 1/10W J  | *     |
| R1798           | NRSA02J-563X | MG R      | 56kΩ 1/10W J  | *     |
| R1799           | NRSA02J-682X | MG R      | 6.8kΩ 1/10W J | *     |
| R1801-03        | NRSA02J-221X | MG R      | 220Ω 1/10W J  | *     |
| R1811-13        | NRSA02J-0R0X | MG R      | 0.0Ω 1/10W J  | *     |
| R1815           | NRSA02J-0R0X | MG R      | 0.0Ω 1/10W J  | *     |
| R1816           | NRSA02J-103X | MG R      | 10kΩ 1/10W J  | *     |
| Δ R1901         | QRF154K-3R3  | UNF R     | 3.3 Ω 15W K   | *     |
| R1902           | QRG039J-333  | OM R      | 33kΩ 3W J     | *     |
| R1903           | QRE121J-681Y | C R       | 680Ω 1/2W J   | *     |
| R1904-05        | QRT029J-R15  | MF R      | 0.15Ω 2W J    | *     |
| R1907-08        | QRL029J-823  | OM R      | 82kΩ 2W J     | *     |
| R1909           | QRE121J-332Y | C R       | 3.3kΩ 1/2W J  | *     |
| R1910           | QRF154J-680  | UNF R     | 68 Ω 15W J    | *     |
| R1912           | QRE121J-564Y | C R       | 560kΩ 1/2W J  | *     |
| R1913           | QRN141J-183Y | C R       | 18kΩ 1/4W J   | *     |
| R1914           | QRE121J-4R7Y | C R       | 4.7Ω 1/2W J   | *     |
| R1916           | QRE121J-152Y | C R       | 1.5kΩ 1/2W J  | *     |
| R1917           | QRE121J-103Y | C R       | 10kΩ 1/2W J   | *     |

| Symbol No.      | Part No.     | Part Name | Description   | Local |
|-----------------|--------------|-----------|---------------|-------|
| <b>RESISTOR</b> |              |           |               |       |
| R1918           | QRE121J-102Y | C R       | 1kΩ 1/2W J    | *     |
| R1923           | QRT039J-2R2  | MF R      | 2.2Ω 3W J     | *     |
| R1924           | QRL029J-221  | OM R      | 220Ω 2W J     | *     |
| R1925           | NRSA02J-103X | MG R      | 10kΩ 1/10W J  | *     |
| R1932           | NRSA02J-104X | MG R      | 100kΩ 1/10W J | *     |
| R1933           | NRSA02J-223X | MG R      | 22kΩ 1/10W J  | *     |
| R1934           | NRSA02J-682X | MG R      | 6.8kΩ 1/10W J | *     |
| R1941           | NRSA02J-102X | MG R      | 1kΩ 1/10W J   | *     |
| R1942           | NRSA02J-222X | MG R      | 2.2kΩ 1/10W J | *     |
| R1943           | NRSA02J-0R0X | MG R      | 0.0Ω 1/10W J  | *     |
| R1944           | NRSA02J-393X | MG R      | 39kΩ 1/10W J  | *     |
| R1945           | NRSA02J-223X | MG R      | 22kΩ 1/10W J  | *     |
| R1946           | NRSA02J-104X | MG R      | 100kΩ 1/10W J | *     |
| R1947           | QRJ149J-821  | C R       | 820Ω 1/4W J   | *     |
| R1948           | QRK129J-150  | C R       | 15Ω 1/2W J    | *     |
| R1951-52        | QRT029J-1R0  | MF R      | 1.0Ω 2W J     | *     |
| R1954           | QRE121J-272Y | C R       | 2.7kΩ 1/2W J  | *     |
| R1955           | QRE121J-473Y | C R       | 47kΩ 1/2W J   | *     |
| R1956           | NRSA02J-223X | MG R      | 22kΩ 1/10W J  | *     |
| Δ R1998         | QRZ0057-825  | C R       | 8.2MΩ 1W J    | *     |

**CAPACITOR**

|          |              |         |               |   |
|----------|--------------|---------|---------------|---|
| C1001    | QETN1HM-106Z | E CAP.  | 10μF 50V M    | * |
| C1007    | QETN1CM-477Z | E CAP.  | 470μF 16V M   | * |
| C1008-09 | QETN1EM-476Z | E CAP.  | 47μF 25V M    | * |
| C1010-11 | NCB21HK-103X | C CAP.  | 0.01μF 50V K  | * |
| C1101-02 | NCB21HK-103X | C CAP.  | 0.01μF 50V K  | * |
| C1104-05 | NCB21HK-103X | C CAP.  | 0.01μF 50V K  | * |
| C1111    | QETN1EM-476Z | E CAP.  | 47μF 25V M    | * |
| C1112-14 | NCB21HK-103X | C CAP.  | 0.01μF 50V K  | * |
| C1116    | QFV71HJ-224Z | MF CAP. | 0.22μF 50V J  | * |
| C1117    | QETN1EM-476Z | E CAP.  | 47μF 25V M    | * |
| C1118    | NCB21HK-103X | C CAP.  | 0.01μF 50V K  | * |
| C1119    | NDC21HJ-681X | C CAP.  | 680pF 50V J   | * |
| C1120    | QETN1HM-474Z | E CAP.  | 0.47μF 50V M  | * |
| C1123-24 | NCB21HK-103X | C CAP.  | 0.01μF 50V K  | * |
| C1161    | QETN1HM-106Z | E CAP.  | 10μF 50V M    | * |
| C1163-64 | NDC21HJ-470X | C CAP.  | 47pF 50V J    | * |
| C1165-66 | NCB21HK-103X | C CAP.  | 0.01μF 50V K  | * |
| C1205    | NDC21HJ-330X | C CAP.  | 33pF 50V J    | * |
| C1207    | QFLC1HJ-104Z | M CAP.  | 0.1μF 50V J   | * |
| C1208    | QETN1HM-475Z | E CAP.  | 4.7μF 50V M   | * |
| C1209    | QETN1CM-227Z | E CAP.  | 220μF 16V M   | * |
| C1210    | NCB21HK-103X | C CAP.  | 0.01μF 50V K  | * |
| C1211    | NDC21HJ-681X | C CAP.  | 680pF 50V J   | * |
| C1212    | QFLC1HJ-104Z | M CAP.  | 0.1μF 50V J   | * |
| C1213    | QETN1HM-105Z | E CAP.  | 1μF 50V M     | * |
| C1214    | QFLC1HJ-104Z | M CAP.  | 0.1μF 50V J   | * |
| C1215    | QETN1HM-225Z | E CAP.  | 2.2μF 50V M   | * |
| C1231    | QETN1EM-476Z | E CAP.  | 47μF 25V M    | * |
| C1232    | QETN1HM-106Z | E CAP.  | 10μF 50V M    | * |
| C1233    | QETN1EM-476Z | E CAP.  | 47μF 25V M    | * |
| C1251    | QFLC1HJ-473Z | M CAP.  | 0.047μF 50V J | * |
| C1288    | QETN1CM-108Z | E CAP.  | 1000μF 16V M  | * |
| C1290-92 | QETN1CM-107Z | E CAP.  | 100μF 16V M   | * |
| C1293-95 | NCB21HK-103X | C CAP.  | 0.01μF 50V K  | * |
| C1296    | QETN1CM-107Z | E CAP.  | 100μF 16V M   | * |
| C1298    | NCB21HK-103X | C CAP.  | 0.01μF 50V K  | * |
| C1299    | QETN1CM-227Z | E CAP.  | 220μF 16V M   | * |
| C1303    | NDC21HJ-560X | C CAP.  | 56pF 50V J    | * |
| C1304    | NCB21HK-103X | C CAP.  | 0.01μF 50V K  | * |
| C1305    | NDC21HJ-120X | C CAP.  | 12pF 50V J    | * |
| C1306    | QETN1EM-476Z | E CAP.  | 47μF 25V M    | * |
| C1307    | NCB21HK-103X | C CAP.  | 0.01μF 50V K  | * |
| C1308-09 | QFLC1HJ-104Z | M CAP.  | 0.1μF 50V J   | * |
| C1311    | QFLC1HJ-103Z | M CAP.  | 0.01μF 50V J  | * |



| Symbol No.       | Part No.     | Part Name | Description          | Local |
|------------------|--------------|-----------|----------------------|-------|
| <b>CAPACITOR</b> |              |           |                      |       |
| C1312            | QETN1HM-225Z | E CAP.    | 2.2μF 50V M          | *     |
| C1313            | QETN1HM-475Z | E CAP.    | 4.7μF 50V M          | *     |
| C1314            | NDC21HJ-151X | C CAP.    | 150pF 50V J          | *     |
| C1315            | NRSA02J-0ROX | MG R      | 0.0Ω 1/10W J         | *     |
| C1320            | NDC21HJ-330X | C CAP.    | 33pF 50V J           | *     |
| C1351            | QFLC1HJ-473Z | M CAP.    | 0.047μF 50V J        | *     |
| C1352            | QFLC1HJ-473Z | M CAP.    | 0.047μF 50V J        | *     |
| C1391            | QETN1CM-107Z | E CAP.    | 100μF 16V M          | *     |
| C1402            | QETN1HM-105Z | E CAP.    | 1μF 50V M            | *     |
| C1406            | QFLC1HJ-103Z | M CAP.    | 0.01μF 50V J         | *     |
| C1407            | QCS32HJ-100Z | C CAP.    | 10pF 500V J          | *     |
| C1410            | QETN1VM-107Z | E CAP.    | 100μF 35V M          | *     |
| C1411            | QETN1VM-477Z | E CAP.    | 470μF 35V M          | *     |
| C1412            | QFLC2AK-563Z | M CAP.    | 0.056μF 100V K       | *     |
| C1413            | QETN1EM-228  | E CAP.    | 2200μF 25V M         | *     |
| C1414            | QETN1HM-335Z | E CAP.    | 3.3μF 50V M          | *     |
| C1421            | QETN1HM-476Z | E CAP.    | 47μF 50V M           | *     |
| C1422            | QETN1EM-476Z | E CAP.    | 47μF 25V M           | *     |
| C1425            | QFN31HJ-152Z | M CAP.    | 1500pF 50V J         | *     |
| C1501            | QETN1CM-107Z | E CAP.    | 100μF 16V M          | *     |
| C1502-03         | NCB21HK-103X | C CAP.    | 0.01μF 50V K         | *     |
| C1505-06         | NCB21HK-103X | C CAP.    | 0.01μF 50V K         | *     |
| C1507            | QETN1HM-105Z | E CAP.    | 1μF 50V M            | *     |
| C1521            | QCB32HK-151Z | C CAP.    | 150pF 500V K         | *     |
| C1522            | QCB32HK-331Z | C CAP.    | 330pF 500V K         | *     |
| C1523            | QETN2CM-105Z | E CAP.    | 1μF 160V M           | *     |
| Δ C1531          | QFZ0117-3001 | MPP CAP.  | 3000pF 1.4KVH±2.5%   | *     |
| Δ C1532          | QFZ0117-122Z | MPP CAP.  | 0.0122μF 1.4KVH±2.5% | *     |
| Δ C1533          | QFP32GJ-223  | PP CAP.   | 0.022μF 400V J       | *     |
| C1534            | QEHK2EM-225Z | E CAP.    | 2.2μF 250V M         | *     |
| Δ C1535          | QFZ0119-754  | MPP CAP.  | 0.75μF 200V ±3%      | *     |
| C1536            | QCB32HK-561Z | C CAP.    | 560pF 500V K         | *     |
| C1538            | QEZ0420-107  | E CAP.    | 100μF 160V M         | *     |
| C1541            | QETN2EM-336  | E CAP.    | 33μF 250V M          | *     |
| C1542            | QETN1VM-108  | E CAP.    | 1000μF 35V M         | *     |
| C1544            | QETN1VM-107Z | E CAP.    | 100μF 35V M          | *     |
| C1545            | QFLC2AJ-103Z | M CAP.    | 0.01μF 100V J        | *     |
| C1546            | QFV71HJ-564Z | NF CAP.   | 0.56μF 50V J         | *     |
| C1548            | QCS32HJ-221Z | C CAP.    | 220pF 500V J         | *     |
| C1549            | QETN1HM-106Z | E CAP.    | 10μF 50V M           | *     |
| C1551            | QETN1HM-106Z | E CAP.    | 10μF 50V M           | *     |
| C1578-79         | QEM61HK-475Z | E CAP.    | 4.7μF 50V K          | *     |
| C1581            | QFLC1HJ-103Z | M CAP.    | 0.01μF 50V J         | *     |
| C1582            | QFLC1HJ-563Z | M CAP.    | 0.056μF 50V J        | *     |
| C1584            | NCB21HK-473X | C CAP.    | 0.047μF 50V K        | *     |
| C1604            | QENC1HM-474Z | BP E CAP. | 0.47μF 50V M         | *     |
| C1607            | QENC1HM-474Z | BP E CAP. | 0.47μF 50V M         | *     |
| C1609            | QETN1CM-107Z | E CAP.    | 100μF 16V M          | *     |
| C1613            | QETN1EM-108Z | E CAP.    | 1000μF 25V M         | *     |
| C1615            | QETN1EM-108Z | E CAP.    | 1000μF 25V M         | *     |
| C1617            | QETN1EM-108Z | E CAP.    | 1000μF 25V M         | *     |
| C1618            | QFV71HJ-224Z | NF CAP.   | 0.22μF 50V J         | *     |
| C1622            | QETN1HM-106Z | E CAP.    | 10μF 50V M           | *     |
| C1623-24         | QENC1HM-474Z | BP E CAP. | 0.47μF 50V M         | *     |
| C1631            | QETN1VM-476Z | E CAP.    | 47μF 35V M           | *     |
| C1701            | NDC21HJ-102X | C CAP.    | 1000pF 50V J         | *     |
| C1702            | NCB21HK-822X | C CAP.    | 8200pF 50V K         | *     |
| C1703            | NCB21HK-102X | C CAP.    | 1000pF 50V K         | *     |
| C1704            | NCB21HK-103X | C CAP.    | 0.01μF 50V K         | *     |
| C1705            | NDC21HJ-471X | C CAP.    | 470pF 50V J          | *     |
| C1706            | QFLC1HJ-104Z | M CAP.    | 0.1μF 50V J          | *     |
| C1707            | NDC21HJ-180X | C CAP.    | 18pF 50V J           | *     |
| C1708            | NDC21HJ-220X | C CAP.    | 22pF 50V J           | *     |
| C1709            | QETN1EM-476Z | E CAP.    | 47μF 25V M           | *     |
| C1710            | QFLC1HJ-104Z | M CAP.    | 0.1μF 50V J          | *     |
| C1711            | NCB21HK-103X | C CAP.    | 0.01μF 50V K         | *     |
| C1712-13         | QETN1CM-107Z | E CAP.    | 100μF 16V M          | *     |
| C1714            | QFLC1HJ-104Z | M CAP.    | 0.1μF 50V J          | *     |

| Symbol No.       | Part No.     | Part Name | Description    | Local |
|------------------|--------------|-----------|----------------|-------|
| <b>CAPACITOR</b> |              |           |                |       |
| C1715            | NDC21HJ-150X | C CAP.    | 15pF 50V J     | *     |
| C1716            | NDC21HJ-390X | C CAP.    | 39pF 50V J     | *     |
| C1717            | NDC21HJ-151X | C CAP.    | 150pF 50V J    | *     |
| C1718            | NRSA02J-0ROX | MG R      | 0.0Ω 1/10W J   | *     |
| C1719            | QETN1HM-106Z | E CAP.    | 10μF 50V M     | *     |
| C1720            | NDC21HJ-151X | C CAP.    | 150pF 50V J    | *     |
| C1722            | NCB21HK-103X | C CAP.    | 0.01μF 50V K   | *     |
| C1731            | QETN1HM-105Z | E CAP.    | 1μF 50V M      | *     |
| C1732            | NCB21HK-103X | C CAP.    | 0.01μF 50V K   | *     |
| C1733            | NCB21HJ-101X | C CAP.    | 100pF 50V J    | *     |
| C1734            | NCB21HK-103X | C CAP.    | 0.01μF 50V K   | *     |
| C1735            | QETN1AM-227Z | E CAP.    | 220μF 10V M    | *     |
| C1761            | QETN1HM-105Z | E CAP.    | 1μF 50V M      | *     |
| C1762            | NDC21HJ-221X | C CAP.    | 220pF 50V J    | *     |
| C1763            | NCB21HK-102X | C CAP.    | 1000pF 50V K   | *     |
| C1766            | QENC1HM-474Z | BP E CAP. | 0.47μF 50V M   | *     |
| C1771            | QETN1EM-476Z | E CAP.    | 47μF 25V M     | *     |
| C1772            | NCB21HK-103X | C CAP.    | 0.01μF 50V K   | *     |
| C1777            | NCB21HK-103X | C CAP.    | 0.01μF 50V K   | *     |
| C1779            | NDC21HJ-100X | C CAP.    | 10pF 50V J     | *     |
| C1782            | NDC21HJ-102X | C CAP.    | 1000pF 50V J   | *     |
| C1783            | NCB21HK-222X | C CAP.    | 2200pF 50V K   | *     |
| C1784            | NCB21HK-102X | C CAP.    | 1000pF 50V K   | *     |
| C1785-88         | NRSA02J-0ROX | MG R      | 0.0Ω 1/10W J   | *     |
| C1789            | QCS31HJ-331Z | C CAP.    | 330pF 50V J    | *     |
| C1805            | QETN1CM-227Z | E CAP.    | 220μF 16V M    | *     |
| C1806            | NCB21HK-103X | C CAP.    | 0.01μF 50V K   | *     |
| Δ C1811-13       | NCB21HK-103X | C CAP.    | 0.01μF 50V K   | *     |
| Δ C1904          | QCZ9075-471  | C CAP.    | 470pFAC250V M  | *     |
| Δ C1905          | QCZ9075-471  | C CAP.    | 470pFAC250V M  | *     |
| Δ C1907          | QCZ9074-472  | C CAP.    | 4700pFAC400V M | *     |
| Δ C1910          | QEZ0371-397  | E CAP.    | 390μF 400V M   | *     |
| C1911            | QETN1VM-477Z | E CAP.    | 470μF 35V M    | *     |
| C1912            | QCS31HJ-471Z | C CAP.    | 470pF 50V J    | *     |
| C1913            | QCZ0325-102  | C CAP.    | 1000pF 2000V K | *     |
| C1914            | QCZ0122-391  | C CAP.    | 390pF 2000V K  | *     |
| C1915            | QCB32HK-103  | C CAP.    | 0.01μF 500V K  | *     |
| C1916            | QCZ0325-561  | C CAP.    | 560pF 2000V K  | *     |
| C1918            | QFN31HJ-102Z | M CAP.    | 1000pF 50V J   | *     |
| C1919            | QFN31HJ-152Z | M CAP.    | 1500pF 50V J   | *     |
| C1920            | QFLC1HJ-104Z | M CAP.    | 0.1μF 50V J    | *     |
| C1921            | QCZ0116-152Z | C CAP.    | 1500pF 1000V K | *     |
| C1922            | QCZ0132-152Z | C CAP.    | 1500pF 500V K  | *     |
| C1923            | QCB32HK-561Z | C CAP.    | 560pF 500V K   | *     |
| Δ C1924          | QEZ0420-107  | E CAP.    | 100μF 160V M   | *     |
| C1926            | QETN1CM-108Z | E CAP.    | 1000μF 16V M   | *     |
| C1927            | QETN1CM-107Z | E CAP.    | 100μF 16V M    | *     |
| C1928            | QETN1EM-108Z | E CAP.    | 1000μF 25V M   | *     |
| C1938            | NCB21HK-473X | C CAP.    | 0.047μF 50V K  | *     |
| C1951            | QETN1CM-107Z | E CAP.    | 100μF 16V M    | *     |
| C1952            | QETN1HM-476Z | E CAP.    | 47μF 50V M     | *     |
| Δ C1981          | QCZ9078-102  | C CAP.    | 1000pFAC250V M | *     |
| Δ C1982          | QCZ9078-102  | C CAP.    | 1000pFAC250V M | *     |
| Δ C1990          | QCZ9075-222  | C CAP.    | 2200pFAC250V M | *     |

**TRANSFORMER**

|         |               |                 |   |
|---------|---------------|-----------------|---|
| T1111   | CELT001-209J3 | C.WAVE TRANSF.  | * |
| T1521   | CE42034-002   | H.DRIVE TRANSF. | * |
| Δ T1522 | QQH0025-001   | FLYBACK TRANSF. | * |
| Δ T1901 | CETS097-001J8 | SW TRANSF.      | * |

**COIL**

|       |              |              |        |   |
|-------|--------------|--------------|--------|---|
| L1001 | QQL03BJ-150Z | COIL         | 15μH   | * |
| L1101 | QQL014-R22   | PEAKING COIL | 0.22μH | * |
| L1131 | QQL03BJ-220Z | COIL         | 22μH   | * |

| △ Symbol No. | Part No.     | Part Name      | Description | Local |
|--------------|--------------|----------------|-------------|-------|
| <b>COIL</b>  |              |                |             |       |
| L1161        | QQL03BJ-220Z | COIL           | 22μH        | *     |
| L1202        | QQL03BJ-560Z | COIL           | 56μH        | *     |
| L1205        | QQL03BJ-4R7Z | COIL           | 4.7μH       | *     |
| L1301        | QQL03BJ-150Z | COIL           | 15μH        | *     |
| L1501        | QQL03BJ-4R7Z | COIL           | 4.7μH       | *     |
| △ L1531      | CE41663-008  | LINEARITY COIL |             | *     |
| △ L1532      | QQLZ016-821  | CHOKE COIL     |             | *     |
| △ L1591      | QQLZ018-430  | HEATER CHOKE   |             | *     |
| L1701-02     | QQL03BJ-4R7Z | COIL           | 4.7μH       | *     |
| L1704        | QQL39BK-8R2Z | COIL           | 8.2μH       | *     |
| L1771        | QQL03BJ-4R7Z | COIL           | 4.7μH       | *     |
| L1921        | QQL42AK-820Z | COIL           | 82μH        | *     |
| L1922        | QQL42AK-220Z | COIL           | 22μH        | *     |

|              |                |              |  |   |
|--------------|----------------|--------------|--|---|
| <b>DIODE</b> |                |              |  |   |
| D1001        | MTZJ33A-T2     | ZENER DIODE  |  | * |
| D1201        | 1SS133-T2      | SI. DIODE    |  | * |
| D1211-12     | 1SS133-T2      | SI. DIODE    |  | * |
| D1391        | MTZJ8.2B-T2    | ZENER DIODE  |  | * |
| D1401        | 1N4003-T2      | SI. DIODE    |  | * |
| D1402        | MTZJ75-T2      | ZENER DIODE  |  | * |
| △ D1531      | RH3G-F1        | SI. DIODE    |  | * |
| △ D1532      | RU3AM-LFC4     | SI. DIODE    |  | * |
| D1533        | RGP10J-5025-T3 | SI. DIODE    |  | * |
| D1540        | MTZJ36A-T2     | ZENER DIODE  |  | * |
| D1541        | RH15-T3        | SI. DIODE    |  | * |
| D1542        | RGP10J-5025-T3 | SI. DIODE    |  | * |
| D1543        | RH15-T3        | SI. DIODE    |  | * |
| D1544        | 1SS81-T2       | SI. DIODE    |  | * |
| D1546        | 1SR124-400A-T2 | SI. DIODE    |  | * |
| D1549        | MTZJ9.1B-T2    | ZENER DIODE  |  | * |
| D1551        | MTZJ7.5S-T2    | ZENER DIODE  |  | * |
| D1552        | 1SS133-T2      | SI. DIODE    |  | * |
| D1631-34     | 1SS133-T2      | SI. DIODE    |  | * |
| D1701-04     | 1SS133-T2      | SI. DIODE    |  | * |
| D1706-08     | 1SS133-T2      | SI. DIODE    |  | * |
| D1710        | MTZJ5.6A-T2    | ZENER DIODE  |  | * |
| D1712-13     | 1SS133-T2      | SI. DIODE    |  | * |
| D1771-72     | MTZJ6.2B-T2    | ZENER DIODE  |  | * |
| D1783        | 1SS133-T2      | SI. DIODE    |  | * |
| D1804        | MTZJ15A-T2     | ZENER DIODE  |  | * |
| △ D1901      | D3SBA60        | DIODE BRIDGE |  | * |
| △ D1902      | RGP10J-5025-T3 | SI. DIODE    |  | * |
| D1903-04     | 1SS133-T2      | SI. DIODE    |  | * |
| D1905        | RU1C-LFC4      | SI. DIODE    |  | * |
| D1906        | MTZJ6.8A-T2    | ZENER DIODE  |  | * |
| D1910        | RGP10J-5025-T3 | SI. DIODE    |  | * |
| D1911        | 1SS133-T2      | SI. DIODE    |  | * |
| D1912        | MTZJ15A-T2     | ZENER DIODE  |  | * |
| D1913        | RGP10J-5025-T3 | SI. DIODE    |  | * |
| D1914        | MTZJ15A-T2     | ZENER DIODE  |  | * |
| D1921        | RU30A-F1       | SI. DIODE    |  | * |
| D1922-23     | RU3YX-LFC4     | SI. DIODE    |  | * |
| D1931        | 1SS133-T2      | SI. DIODE    |  | * |
| D1941        | MTZJ9.1C-T2    | ZENER DIODE  |  | * |
| D1951        | MTZJ7.5S-T2    | ZENER DIODE  |  | * |
| D1952        | 1SS133-T2      | SI. DIODE    |  | * |

|                   |                 |                |  |   |
|-------------------|-----------------|----------------|--|---|
| <b>TRANSISTOR</b> |                 |                |  |   |
| Q1101             | 2SC5083/L-P/-T  | SI. TRANSISTOR |  | * |
| Q1131             | 2SC2412K/QR/-X  | SI. TRANSISTOR |  | * |
| Q1161             | 2SC2412K/QR/-X  | SI. TRANSISTOR |  | * |
| Q1201             | 2SC2412K/QR/-X  | SI. TRANSISTOR |  | * |
| Q1202             | 2SA1037AK/QR/-X | SI. TRANSISTOR |  | * |
| Q1211-12          | 2SC2412K/QR/-X  | SI. TRANSISTOR |  | * |

| △ Symbol No.      | Part No.        | Part Name        | Description | Local |
|-------------------|-----------------|------------------|-------------|-------|
| <b>TRANSISTOR</b> |                 |                  |             |       |
| Q1301-02          | 2SC2412K/QR/-X  | SI. TRANSISTOR   |             | *     |
| Q1303-05          | 2SA1037AK/QR/-X | SI. TRANSISTOR   |             | *     |
| Q1351             | 2SC2412K/QR/-X  | SI. TRANSISTOR   |             | *     |
| Q1521             | BSN274          | F.E.T.           |             | *     |
| △ Q1531           | 2SD2539-LB      | SI. TRANSISTOR   | H. OUT      | *     |
| △ Q1542           | 2SC2785/JH/-T   | SI. TRANSISTOR   |             | *     |
| Q1551             | 2SC2412K/QR/-X  | SI. TRANSISTOR   |             | *     |
| Q1553             | 2SD1408/OY/-LB  | SI. TRANSISTOR   |             | *     |
| Q1601             | 2SC2412K/QR/-X  | SI. TRANSISTOR   |             | *     |
| Q1603             | DTC124EKA-X     | DIGI. TRANSISTOR |             | *     |
| Q1604-05          | DTC323TK-X      | DIGI. TRANSISTOR |             | *     |
| Q1631             | 2SA1037AK/QR/-X | SI. TRANSISTOR   |             | *     |
| Q1701-02          | 2SC2412K/QR/-X  | SI. TRANSISTOR   |             | *     |
| Q1703             | DTC124EKA-X     | DIGI. TRANSISTOR |             | *     |
| Q1704             | 2SC2412K/QR/-X  | SI. TRANSISTOR   |             | *     |
| Q1781-83          | 2SC2412K/QR/-X  | SI. TRANSISTOR   |             | *     |
| Q1911             | 2SA933AS/QR/-T  | SI. TRANSISTOR   |             | *     |
| Q1923             | 2SA1020/Y/-T    | SI. TRANSISTOR   |             | *     |
| Q1924             | 2SC2412K/QR/-X  | SI. TRANSISTOR   |             | *     |
| Q1941             | DTC124EKA-X     | DIGI. TRANSISTOR |             | *     |
| Q1942-43          | 2SC2412K/QR/-X  | SI. TRANSISTOR   |             | *     |
| Q1951             | 2SA949/Y/Z1-T   | SI. TRANSISTOR   |             | *     |

|           |                |                   |           |   |
|-----------|----------------|-------------------|-----------|---|
| <b>IC</b> |                |                   |           |   |
| IC1001    | AN78L05-T      | I.C. (MONO-ANA)   |           | * |
| IC1101    | MS2342SP       | I.C. (MONO-ANA)   |           | * |
| IC1201    | TB1230N        | I.C. (DIGI-OTHER) |           | * |
| IC1291    | AN78N05        | I.C. (M)          |           | * |
| IC1292    | AN78L05-T      | I.C. (MONO-ANA)   |           | * |
| IC1293    | BA17809T       | I.C. (MONO-ANA)   |           | * |
| IC1294    | AN78L09        | I.C. (MONO-ANA)   |           | * |
| IC1301    | TDA8601        | I.C. (MONO-ANA)   |           | * |
| △ IC1401  | LA7841         | I.C. (MONO-ANA)   |           | * |
| IC1402    | AN78N12        | I.C. (MONO-ANA)   |           | * |
| △ IC1601  | LA4485         | I.C. (MONO-ANA)   |           | * |
| IC1701    | M37271MF-221SP | I.C. (MICRO-COMP) |           | * |
| IC1702    | AT24C04-T3885  | I.C.              | (SERVICE) | * |
| IC1703    | L78LR05E-MA    | I.C. (MONO-ANA)   |           | * |
| △ IC1901  | STR-F6655      | I.C. (HYBRID)     |           | * |
| △ IC1941  | SE135N         | I.C. (HYBRID)     |           | * |

|               |                |                    |              |   |
|---------------|----------------|--------------------|--------------|---|
| <b>OTHERS</b> |                |                    |              |   |
| CF1001        | FTP47.25MF     | CERAMIC FILTER     |              | * |
| CF1131        | QAX0339-001    | CERAMIC FILTER     |              | * |
| CF1161        | SFSH4.5MC8     | CERAMIC FILTER     |              | * |
| △ CP1921      | ICP-N75-Y      | I.C. PROTECT       |              | * |
| △ CP1922      | ICP-N75-Y      | I.C. PROTECT       |              | * |
| △ FR1542      | QRZ9021-1R2    | F R                | 1.2Ω 1W J    | * |
| △ FR1544      | QRZ9017-4R7    | F R                | 4.7Ω 1/4W J  | * |
| △ FR1545      | QRE121J-682Y   | C R                | 6.8kΩ 1/2W J | * |
| K1401         | QQR0582-001Z   | BEADS CORE         |              | * |
| K1901-03      | QQR0582-001Z   | BEADS CORE         |              | * |
| K1921         | QQR0621-001Z   | BEADS CORE         |              | * |
| K1922         | QQR0582-001Z   | BEADS CORE         |              | * |
| K1923         | QQR0621-001Z   | BEADS CORE         |              | * |
| △ PC1901      | TLP621(GR)-LF2 | I.C. (PH. COUPLER) |              | * |
| SF1101        | QAX0324-002    | SAW FILTER         |              | * |
| △ TH1901      | QAD0101-9R0    | P.THERMISTOR       |              | * |
| △ TH1902      | QAD0101-9R0    | P.THERMISTOR       |              | * |
| △ TU1001      | CEEM270-A02    | TUNER              |              | * |
| W1018-21      | NRSA02J-OROX   | MG R               | 0.0Ω 1/10W J | * |
| W1412         | NRSA02J-OROX   | MG R               | 0.0Ω 1/10W J | * |
| W1432         | NRSA02J-OROX   | MG R               | 0.0Ω 1/10W J | * |
| W1441         | NRSA02J-OROX   | MG R               | 0.0Ω 1/10W J | * |
| W1448-49      | NRSA02J-OROX   | MG R               | 0.0Ω 1/10W J | * |
| W1452         | NRSA02J-OROX   | MG R               | 0.0Ω 1/10W J | * |

| Symbol No. | Part No.     | Part Name | Description  | Local |
|------------|--------------|-----------|--------------|-------|
| OTHERS     |              |           |              |       |
| W1456-59   | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
| W1461      | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
| W1471      | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
| W1474      | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
| W1477      | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
| W1489-90   | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
| W1502      | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
| W1532      | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
|            |              |           |              |       |
| W1536      | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
| W1552      | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
| W1557-58   | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
| W1564      | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
| W1566      | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
| W1571      | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
| W1585      | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
| W1592      | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
|            |              |           |              |       |
| W1594-95   | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
| W1615      | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
| W1618-20   | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
| W1624      | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
| W1626      | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
| W1644      | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
| W1659-60   | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
| W1675      | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
|            |              |           |              |       |
| W1680      | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
| W1690      | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
| W1692-93   | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
| W1696-97   | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
| W1707      | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
| W1715-16   | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
| W1719      | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
| W1723-24   | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
|            |              |           |              |       |
| W1730      | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
| X1301      | QAX0305-001Z | CRYSTAL   |              | *     |
| X1701      | QAX0397-001Z | CRYSTAL   |              | *     |
| Y1003      | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
| Y1311      | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
| Y1601      | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |
| Y1703      | NRSA02J-OROX | MG R      | 0.0Ω 1/10W J | *     |

CRT SOCKET P.W. BOARD ASS'Y (SGB-3007A-M2)

| Symbol No. | Part No.        | Part Name     | Description    | Local |
|------------|-----------------|---------------|----------------|-------|
| RESISTOR   |                 |               |                |       |
| R3301-06   | NRSA02J-151X    | MG R          | 150Ω 1/10W J   | *     |
| R3307-09   | NRSA02J-820X    | MG R          | 82Ω 1/10W J    | *     |
| R3310-15   | QRG029J-153     | OM R          | 15kΩ 2W J      | *     |
| R3316-18   | NRSA02J-151X    | MG R          | 150Ω 1/10W J   | *     |
| R3319      | NRSA02J-101X    | MG R          | 100Ω 1/10W J   | *     |
| R3325-27   | QRZ0111-152     | C R           | 15 Ω 1/2W K    | *     |
| R3341-43   | NRSA02J-182X    | MG R          | 1.8kΩ 1/10W J  | *     |
| R3351      | NRSA02J-221X    | MG R          | 220Ω 1/10W J   | *     |
|            |                 |               |                |       |
| R3352      | NRSA02J-152X    | MG R          | 1.5kΩ 1/10W J  | *     |
| R3354      | NRSA02J-OROX    | MG R          | 0.0Ω 1/10W J   | *     |
| R3363      | QRC122K-474     | COMP.R        | 470kΩ 1/2W K   | *     |
|            |                 |               |                |       |
| CAPACITOR  |                 |               |                |       |
| C3301-03   | NDC21HJ-391X    | C CAP.        | 390pF 50V J    | *     |
| C3311      | QETN1CM-337Z    | E CAP.        | 330μF 16V M    | *     |
| C3321      | QETN2EM-105Z    | E CAP.        | 1μF 250V M     | *     |
| C3331-33   | NDC21HJ-101X    | C CAP.        | 100pF 50V J    | *     |
| C3351      | QETN1CM-107Z    | E CAP.        | 100μF 16V M    | *     |
| Δ C3363    | QCZ0121-102     | C CAP.        | 1000pF 3000V Z | *     |
|            |                 |               |                |       |
| COIL       |                 |               |                |       |
| L3304      | QQL39BK-470Z    | COIL          | 47μH           | *     |
|            |                 |               |                |       |
| DIODE      |                 |               |                |       |
| D3301-03   | 1SS133-T2       | SI.DIODE      |                | *     |
| D3351      | 1SS133-T2       | SI.DIODE      |                | *     |
| D3353      | MTZJ5.1B-T2     | ZENER DIODE   |                | *     |
| D3354-56   | 1SS133-T2       | SI.DIODE      |                | *     |
|            |                 |               |                |       |
| TRANSISTOR |                 |               |                |       |
| Q3301-03   | 2SC5083/L-P/-T  | SI.TRANSISTOR |                | *     |
| Q3304-06   | 2SC4544-LB      | SI.TRANSISTOR |                | *     |
| Q3351      | 2SA1037AK/QR/-X | SI.TRANSISTOR |                | *     |
| Q3352      | 2SC2412K/QR/-X  | SI.TRANSISTOR |                | *     |
|            |                 |               |                |       |
| OTHERS     |                 |               |                |       |
| Δ SC3001   | CE42535-001J1   | C.R.T.SOCKET  |                | *     |

# FRONT CONTROL P.W. BOARD ASS'Y (SGB-4005A-M2)

| △ Symbol No.      | Part No.       | Part Name       | Description  | Local |
|-------------------|----------------|-----------------|--------------|-------|
| <b>RESISTOR</b>   |                |                 |              |       |
| R4701             | QRE121J-103Y   | C R             | 10kΩ 1/2W J  | *     |
| R4702             | QRE121J-562Y   | C R             | 5.6kΩ 1/2W J | *     |
| R4703-04          | QRE121J-103Y   | C R             | 10kΩ 1/2W J  | *     |
| R4705             | QRE121J-562Y   | C R             | 5.6kΩ 1/2W J | *     |
| R4706             | QRE121J-103Y   | C R             | 10kΩ 1/2W J  | *     |
| R4707-08          | QRE121J-223Y   | C R             | 22kΩ 1/2W J  | *     |
| R4709             | QRE121J-561Y   | C R             | 560Ω 1/2W J  | *     |
| R4710-11          | QRE121J-223Y   | C R             | 22kΩ 1/2W J  | *     |
| R4712             | QRE121J-561Y   | C R             | 560Ω 1/2W J  | *     |
| R4713             | QRE121J-103Y   | C R             | 10kΩ 1/2W J  | *     |
| <b>CAPACITOR</b>  |                |                 |              |       |
| C4701             | QETN1EM-476Z   | E CAP.          | 47μF 25V M   | *     |
| C4702             | QCB32HK-561Z   | C CAP.          | 560pF 500V K | *     |
| <b>COIL</b>       |                |                 |              |       |
| L4701             | QQL03BJ-560Z   | COIL            | 56μH         | *     |
| <b>DIODE</b>      |                |                 |              |       |
| D4702             | SPR-39MVMF     | L.E.D.          |              | *     |
| <b>TRANSISTOR</b> |                |                 |              |       |
| Q4701             | 2SA933AS/QR/-T | SI. TRANSISTOR  |              | *     |
| Q4702             | 2SC1740S/QR/-T | SI. TRANSISTOR  |              | *     |
| <b>IC</b>         |                |                 |              |       |
| IC4701            | PIC-21043SR    | IFR DETECT UNIT |              | *     |
| <b>OTHERS</b>     |                |                 |              |       |
| S4701             | QSP1A11-C19Z   | PUSH SWITCH     | (VOL +)      | *     |
| S4702             | QSP1A11-C19Z   | PUSH SWITCH     | (VOL -)      | *     |
| S4703             | QSP1A11-C19Z   | PUSH SWITCH     | (CH +)       | *     |
| S4704             | QSP1A11-C19Z   | PUSH SWITCH     | (CH -)       | *     |
| S4705             | QSP1A11-C19Z   | PUSH SWITCH     | (MENU)       | *     |
| △ S4901           | QSP4K21-C01    | PUSH SWITCH     | (POWER)      | *     |

# AV SELECTOR P.W. BOARD ASS'Y (SGB-8008A-M2)

| △ Symbol No.             | Part No.     | Part Name | Description   | Local |
|--------------------------|--------------|-----------|---------------|-------|
| <b>VARIABLE RESISTOR</b> |              |           |               |       |
| R8129                    | QVP0006-473Z | V R(      | 47kΩ          |       |
| <b>RESISTOR</b>          |              |           |               |       |
| R8001                    | NRSA02J-223X | MG R      | 22kΩ 1/10W J  | *     |
| R8002-04                 | NRSA02J-561X | MG R      | 560Ω 1/10W J  | *     |
| R8005                    | QRK129J-5R6  | C R       | 5.6Ω 1/2W J   | *     |
| R8006                    | NRSA02J-820X | MG R      | 82Ω 1/10W J   | *     |
| R8101                    | NRSA02J-562X | MG R      | 5.6kΩ 1/10W J | *     |
| R8102                    | NRSA02J-182X | MG R      | 1.8kΩ 1/10W J | *     |
| R8103                    | QRE121J-101Y | C R       | 100Ω 1/2W J   | *     |
| R8104                    | NRSA02J-180X | MG R      | 18Ω 1/10W J   | *     |
| R8105                    | NRSA02J-270X | MG R      | 27Ω 1/10W J   | *     |
| R8113                    | NRSA02J-272X | MG R      | 2.7kΩ 1/10W J | *     |
| R8114                    | NRSA02J-334X | MG R      | 330kΩ 1/10W J | *     |
| R8116                    | NRVA02D-221X | MF R      | 220Ω 1/10W D  | *     |
| R8118-19                 | NRSA02J-104X | MG R      | 100kΩ 1/10W J | *     |
| R8120                    | NRSA02J-101X | MG R      | 100Ω 1/10W J  | *     |
| R8121                    | NRSA02J-103X | MG R      | 10kΩ 1/10W J  | *     |
| R8122                    | NRSA02J-271X | MG R      | 270Ω 1/10W J  | *     |
| R8123                    | NRSA02J-181X | MG R      | 180Ω 1/10W J  | *     |
| R8125                    | NRSA02J-751X | MG R      | 750Ω 1/10W J  | *     |
| R8126                    | NRSA02J-102X | MG R      | 1kΩ 1/10W J   | *     |
| R8127                    | NRSA02J-330X | MG R      | 33Ω 1/10W J   | *     |
| R8128                    | NRSA02J-102X | MG R      | 1kΩ 1/10W J   | *     |
| R8201-03                 | NRSA02J-102X | MG R      | 1kΩ 1/10W J   | *     |
| R8204                    | NRSA02J-681X | MG R      | 680Ω 1/10W J  | *     |
| R8205                    | NRSA02J-392X | MG R      | 3.9kΩ 1/10W J | *     |
| R8207                    | NRSA02J-391X | MG R      | 390Ω 1/10W J  | *     |
| R8208                    | NRSA02J-102X | MG R      | 1kΩ 1/10W J   | *     |
| R8209                    | NRSA02J-103X | MG R      | 10kΩ 1/10W J  | *     |
| R8210                    | NRSA02J-472X | MG R      | 4.7kΩ 1/10W J | *     |
| R8211                    | NRSA02J-821X | MG R      | 820Ω 1/10W J  | *     |
| R8221-22                 | NRSA02J-0R0X | MG R      | 0.0Ω 1/10W J  | *     |
| R8223                    | NRSA02J-152X | MG R      | 1.5kΩ 1/10W J | *     |
| R8224                    | NRSA02J-821X | MG R      | 820Ω 1/10W J  | *     |
| R8225-27                 | NRSA02J-103X | MG R      | 10kΩ 1/10W J  | *     |
| R8228                    | NRSA02J-153X | MG R      | 15kΩ 1/10W J  | *     |
| R8251-53                 | NRSA02J-102X | MG R      | 1kΩ 1/10W J   | *     |
| R8254                    | NRSA02J-681X | MG R      | 680Ω 1/10W J  | *     |
| R8255                    | NRSA02J-561X | MG R      | 560Ω 1/10W J  | *     |
| R8256                    | NRSA02J-681X | MG R      | 680Ω 1/10W J  | *     |
| R8257                    | NRSA02J-102X | MG R      | 1kΩ 1/10W J   | *     |
| R8258                    | NRSA02J-391X | MG R      | 390Ω 1/10W J  | *     |
| R8260                    | NRSA02J-103X | MG R      | 10kΩ 1/10W J  | *     |
| R8261                    | NRSA02J-472X | MG R      | 4.7kΩ 1/10W J | *     |
| R8262                    | NRSA02J-821X | MG R      | 820Ω 1/10W J  | *     |
| R8292                    | QRL029J-150  | OM R      | 15Ω 2W J      | *     |
| R8301                    | NRSA02J-222X | MG R      | 2.2kΩ 1/10W J | *     |
| R8302                    | NRSA02J-391X | MG R      | 390Ω 1/10W J  | *     |
| R8303                    | NRSA02J-102X | MG R      | 1kΩ 1/10W J   | *     |
| R8304                    | NRSA02J-681X | MG R      | 680Ω 1/10W J  | *     |
| R8305                    | NRSA02J-561X | MG R      | 560Ω 1/10W J  | *     |
| R8306                    | NRSA02J-681X | MG R      | 680Ω 1/10W J  | *     |
| R8307                    | NRSA02J-102X | MG R      | 1kΩ 1/10W J   | *     |
| R8308                    | NRSA02J-391X | MG R      | 390Ω 1/10W J  | *     |
| R8310                    | NRSA02J-103X | MG R      | 10kΩ 1/10W J  | *     |
| R8311                    | NRSA02J-472X | MG R      | 4.7kΩ 1/10W J | *     |
| R8312                    | NRSA02J-821X | MG R      | 820Ω 1/10W J  | *     |
| R8351                    | NRSA02J-103X | MG R      | 10kΩ 1/10W J  | *     |
| R8352                    | NRSA02J-562X | MG R      | 5.6kΩ 1/10W J | *     |
| R8353                    | NRSA02J-221X | MG R      | 220Ω 1/10W J  | *     |
| R8354                    | NRSA02J-272X | MG R      | 2.7kΩ 1/10W J | *     |
| R8355                    | NRSA02J-102X | MG R      | 1kΩ 1/10W J   | *     |
| R8356                    | NRSA02J-392X | MG R      | 3.9kΩ 1/10W J | *     |

| △ Symbol No.     | Part No.     | Part Name | Description   | Local |
|------------------|--------------|-----------|---------------|-------|
| <b>RESISTOR</b>  |              |           |               |       |
| R8357            | NRSA02J-472X | MG R      | 4.7kΩ 1/10W J | *     |
| R8358            | NRSA02J-0R0X | MG R      | 0.0Ω 1/10W J  | *     |
| R8359            | NRSA02J-272X | MG R      | 2.7kΩ 1/10W J | *     |
| R8651            | NRSA02J-102X | MG R      | 1kΩ 1/10W J   | *     |
| R8652            | NRSA02J-561X | MG R      | 560Ω 1/10W J  | *     |
| R8653            | NRSA02J-272X | MG R      | 2.7kΩ 1/10W J | *     |
| R8654            | NRSA02J-333X | MG R      | 33kΩ 1/10W J  | *     |
| R8655            | NRSA02J-332X | MG R      | 3.3kΩ 1/10W J | *     |
| R8656            | NRVA02D-152X | MF R      | 1.5kΩ 1/10W D | *     |
| R8658            | NRVA02D-153X | MF R      | 15kΩ 1/10W D  | *     |
| R8660            | NRSA02J-512X | MG R      | 5.1kΩ 1/10W J | *     |
| R8661            | NRSA02J-473X | MG R      | 47kΩ 1/10W J  | *     |
| R8662-65         | NRSA02J-123X | MG R      | 12kΩ 1/10W J  | *     |
| R8666-67         | NRSA02J-562X | MG R      | 5.6kΩ 1/10W J | *     |
| R8668            | NRSA02J-473X | MG R      | 47kΩ 1/10W J  | *     |
| R8669-70         | NRSA02J-221X | MG R      | 220Ω 1/10W J  | *     |
| R8673-74         | NRSA02J-823X | MG R      | 82kΩ 1/10W J  | *     |
| R8675-76         | NRSA02J-181X | MG R      | 180Ω 1/10W J  | *     |
| R8677            | NRSA02J-0R0X | MG R      | 0.0Ω 1/10W J  | *     |
| R8678-81         | NRSA02J-223X | MG R      | 22kΩ 1/10W J  | *     |
| R8682            | NRSA02J-683X | MG R      | 68kΩ 1/10W J  | *     |
| R8685-88         | NRSA02J-0R0X | MG R      | 0.0Ω 1/10W J  | *     |
| R8801            | NRSA02J-0R0X | MG R      | 0.0Ω 1/10W J  | *     |
| R8803            | NRSA02J-750X | MG R      | 75Ω 1/10W J   | *     |
| R8804            | NRSA02J-221X | MG R      | 220Ω 1/10W J  | *     |
| R8805            | NRSA02J-0R0X | MG R      | 0.0Ω 1/10W J  | *     |
| R8807            | NRSA02J-750X | MG R      | 75Ω 1/10W J   | *     |
| R8808            | NRSA02J-221X | MG R      | 220Ω 1/10W J  | *     |
| R8809            | NRSA02J-563X | MG R      | 56kΩ 1/10W J  | *     |
| R8811            | NRSA02J-750X | MG R      | 75Ω 1/10W J   | *     |
| R8812            | NRSA02J-221X | MG R      | 220Ω 1/10W J  | *     |
| R8813            | NRSA02J-823X | MG R      | 82kΩ 1/10W J  | *     |
| R8814            | NRSA02J-102X | MG R      | 1kΩ 1/10W J   | *     |
| R8815            | NRSA02J-823X | MG R      | 82kΩ 1/10W J  | *     |
| R8816            | NRSA02J-102X | MG R      | 1kΩ 1/10W J   | *     |
| R8817            | NRSA02J-750X | MG R      | 75Ω 1/10W J   | *     |
| R8818            | NRSA02J-221X | MG R      | 220Ω 1/10W J  | *     |
| R8819            | NRSA02J-823X | MG R      | 82kΩ 1/10W J  | *     |
| R8820            | NRSA02J-102X | MG R      | 1kΩ 1/10W J   | *     |
| R8821            | NRSA02J-823X | MG R      | 82kΩ 1/10W J  | *     |
| R8822            | NRSA02J-102X | MG R      | 1kΩ 1/10W J   | *     |
| R8831-33         | NRSA02J-0R0X | MG R      | 0.0Ω 1/10W J  | *     |
| R8834            | NRSA02J-102X | MG R      | 1kΩ 1/10W J   | *     |
| R8835-37         | NRSA02J-0R0X | MG R      | 0.0Ω 1/10W J  | *     |
| <b>CAPACITOR</b> |              |           |               |       |
| C8001            | QETN1HM-475Z | E CAP.    | 4.7μF 50V M   | *     |
| C8004            | QETN1CM-107Z | E CAP.    | 100μF 16V M   | *     |
| C8005            | QETN1HM-106Z | E CAP.    | 10μF 50V M    | *     |
| C8006            | NCB21HK-103X | C CAP.    | 0.01μF 50V K  | *     |
| C8007            | QETN1HM-106Z | E CAP.    | 10μF 50V M    | *     |
| C8008-09         | QETN1EM-476Z | E CAP.    | 47μF 25V M    | *     |
| C8101-04         | NCB21HK-103X | C CAP.    | 0.01μF 50V K  | *     |
| C8105            | QETN1CM-107Z | E CAP.    | 100μF 16V M   | *     |
| C8107            | QETN1HM-106Z | E CAP.    | 10μF 50V M    | *     |
| C8108            | QFV71HJ-474Z | MF CAP.   | 0.47μF 50V J  | *     |
| C8109            | QETN1CM-107Z | E CAP.    | 100μF 16V M   | *     |
| C8110-11         | NCB21HK-222X | C CAP.    | 2200pF 50V K  | *     |
| C8112            | NCB21HK-103X | C CAP.    | 0.01μF 50V K  | *     |
| C8113-14         | QFV71HJ-224Z | MF CAP.   | 0.22μF 50V J  | *     |
| C8115            | NCS21HJ-101X | C CAP.    | 100pF 50V J   | *     |
| C8117            | NCB21HK-222X | C CAP.    | 2200pF 50V K  | *     |
| C8118            | QETN1EM-476Z | E CAP.    | 47μF 25V M    | *     |
| C8119            | QETN1HM-474Z | E CAP.    | 0.47μF 50V M  | *     |
| C8120            | NCB21HK-103X | C CAP.    | 0.01μF 50V K  | *     |
| C8201-02         | QETN1CM-107Z | E CAP.    | 100μF 16V M   | *     |

| △ Symbol No.     | Part No.     | Part Name | Description   | Local |
|------------------|--------------|-----------|---------------|-------|
| <b>CAPACITOR</b> |              |           |               |       |
| C8204            | QETN1EM-476Z | E CAP.    | 47μF 25V M    | *     |
| C8205            | QENC1HM-474Z | BP E CAP. | 0.47μF 50V M  | *     |
| C8221-22         | NCB21HK-103X | C CAP.    | 0.01μF 50V K  | *     |
| C8223            | QETN1EM-476Z | E CAP.    | 47μF 25V M    | *     |
| C8224-25         | NCB21HK-103X | C CAP.    | 0.01μF 50V K  | *     |
| C8228            | QETN1CM-107Z | E CAP.    | 100μF 16V M   | *     |
| C8229            | QETN1EM-476Z | E CAP.    | 47μF 25V M    | *     |
| C8230            | NCB21HK-103X | C CAP.    | 0.01μF 50V K  | *     |
| C8231            | QETN1EM-476Z | E CAP.    | 47μF 25V M    | *     |
| C8232            | NCB21HK-103X | C CAP.    | 0.01μF 50V K  | *     |
| C8234            | NCB21HK-103X | C CAP.    | 0.01μF 50V K  | *     |
| C8235            | NDC21HJ-181X | C CAP.    | 180pF 50V J   | *     |
| C8236-39         | NCB21HK-103X | C CAP.    | 0.01μF 50V K  | *     |
| C8240            | QETN1EM-476Z | E CAP.    | 47μF 25V M    | *     |
| C8241            | NCB21HK-103X | C CAP.    | 0.01μF 50V K  | *     |
| C8251            | QETN1EM-476Z | E CAP.    | 47μF 25V M    | *     |
| C8252            | NCB21HK-103X | C CAP.    | 0.01μF 50V K  | *     |
| C8253            | QETN1EM-476Z | E CAP.    | 47μF 25V M    | *     |
| C8255-56         | QETN1EM-476Z | E CAP.    | 47μF 25V M    | *     |
| C8291-92         | QETN1CM-107Z | E CAP.    | 100μF 16V M   | *     |
| C8293            | NCB21HK-103X | C CAP.    | 0.01μF 50V K  | *     |
| C8295            | QETN1CM-107Z | E CAP.    | 100μF 16V M   | *     |
| C8296            | NCB21HK-103X | C CAP.    | 0.01μF 50V K  | *     |
| C8301            | QETN1EM-476Z | E CAP.    | 47μF 25V M    | *     |
| C8303-04         | QETN1EM-476Z | E CAP.    | 47μF 25V M    | *     |
| C8351            | NDC21HJ-221X | C CAP.    | 220pF 50V J   | *     |
| C8352            | NDC21HJ-560X | C CAP.    | 56pF 50V J    | *     |
| C8353            | NDC21HJ-221X | C CAP.    | 220pF 50V J   | *     |
| C8354            | NDC21HJ-121X | C CAP.    | 120pF 50V J   | *     |
| C8651            | NCB21HK-103X | C CAP.    | 0.01μF 50V K  | *     |
| C8652            | QETN1CM-107Z | E CAP.    | 100μF 16V M   | *     |
| C8653            | QETN1EM-476Z | E CAP.    | 47μF 25V M    | *     |
| C8654            | QFLC1HJ-104Z | M CAP.    | 0.1μF 50V J   | *     |
| C8655            | QENC1HM-475Z | BP E CAP. | 4.7μF 50V M   | *     |
| C8656            | QENC1HM-105Z | BP E CAP. | 1μF 50V M     | *     |
| C8657            | QETN1HM-225Z | E CAP.    | 2.2μF 50V M   | *     |
| C8658            | NCB21HK-473X | C CAP.    | 0.047μF 50V K | *     |
| C8659            | QETN1HM-474Z | E CAP.    | 0.47μF 50V M  | *     |
| C8660-61         | QFLC1HJ-104Z | M CAP.    | 0.1μF 50V J   | *     |
| C8662            | QBTC1CK-335Z | TAN. CAP. | 3.3μF 16V K   | *     |
| C8663            | QETN1HM-105Z | E CAP.    | 1μF 50V M     | *     |
| C8664            | QBTC1CK-106Z | TAN. CAP. | 10μF 16V K    | *     |
| C8665-66         | QETN1HM-105Z | E CAP.    | 1μF 50V M     | *     |
| C8667            | QETN1HM-336Z | E CAP.    | 33μF 50V M    | *     |
| C8668            | QETN1HM-105Z | E CAP.    | 1μF 50V M     | *     |
| C8669-70         | QENC1HM-105Z | BP E CAP. | 1μF 50V M     | *     |
| C8671            | QETN1HM-225Z | E CAP.    | 2.2μF 50V M   | *     |
| C8672            | NCB21HK-222X | C CAP.    | 2200pF 50V K  | *     |
| C8673            | QFLC1HJ-104Z | M CAP.    | 0.1μF 50V J   | *     |
| C8674            | QETN1HM-225Z | E CAP.    | 2.2μF 50V M   | *     |
| C8675            | NCB21HK-222X | C CAP.    | 2200pF 50V K  | *     |
| C8676            | QFLC1HJ-104Z | M CAP.    | 0.1μF 50V J   | *     |
| C8677            | NCB21HK-223X | C CAP.    | 0.022μF 50V K | *     |
| C8679            | QETN1HM-105Z | E CAP.    | 1μF 50V M     | *     |
| C8680            | QETN1EM-476Z | E CAP.    | 47μF 25V M    | *     |
| C8682-83         | QETN1HM-475Z | E CAP.    | 4.7μF 50V M   | *     |
| C8801-03         | QETN1HM-106Z | E CAP.    | 10μF 50V M    | *     |
| C8804-05         | QETN1HM-105Z | E CAP.    | 1μF 50V M     | *     |
| C8806            | QETN1HM-106Z | E CAP.    | 10μF 50V M    | *     |
| C8807-08         | QETN1HM-105Z | E CAP.    | 1μF 50V M     | *     |
| C8821-31         | NCB21HK-103X | C CAP.    | 0.01μF 50V K  | *     |
| C8835-36         | NCB21HK-103X | C CAP.    | 0.01μF 50V K  | *     |
| C8837            | QETN1HM-106Z | E CAP.    | 10μF 50V M    | *     |
| C8838-39         | QETN1EM-476Z | E CAP.    | 47μF 25V M    | *     |
| C8840            | NCB21HK-103X | C CAP.    | 0.01μF 50V K  | *     |
| C8841            | QETN1HM-106Z | E CAP.    | 10μF 50V M    | *     |
| C8842            | NCB21HK-103X | C CAP.    | 0.01μF 50V K  | *     |

△ Symbol No. Part No. Part Name Description Local

**TRANSFORMER**

| Symbol No. | Part No.    | Part Name      | Description | Local |
|------------|-------------|----------------|-------------|-------|
| T8201      | CE42697-001 | LOWPASS FILTER |             | *     |
| T8251      | CE42697-001 | LOWPASS FILTER |             | *     |
| T8301      | CE42697-001 | LOWPASS FILTER |             | *     |

**COIL**

| Symbol No. | Part No.     | Part Name    | Description | Local |
|------------|--------------|--------------|-------------|-------|
| L8001      | QQL03BJ-150Z | COIL         | 15μH        | *     |
| L8101      | QQLZ014-R22  | PEAKING COIL | 0.22μH      | *     |
| L8102      | QQL03BJ-5R6Z | COIL         | 5.6μH       | *     |
| L8103      | CE42452-003  | COIL         |             | *     |
| L8104      | QQL39BK-220Z | COIL         | 22μH        | *     |
| L8222-24   | QQL03BJ-220Z | COIL         | 22μH        | *     |
| L8251      | QQL03BJ-220Z | COIL         | 22μH        | *     |
| L8351      | QQL03BJ-330Z | COIL         | 33μH        | *     |

**DIODE**

| Symbol No. | Part No.    | Part Name   | Description | Local |
|------------|-------------|-------------|-------------|-------|
| D8801-08   | MTZJ9.1C-T2 | ZENER DIODE |             | *     |

**TRANSISTOR**

| Symbol No. | Part No.        | Part Name        | Description | Local |
|------------|-----------------|------------------|-------------|-------|
| Q8101      | 2SC5083/L-P/-T  | SI. TRANSISTOR   |             | *     |
| Q8111      | 2SA1037AK/QR/-X | SI. TRANSISTOR   |             | *     |
| Q8201-03   | 2SC2412K/QR/-X  | SI. TRANSISTOR   |             | *     |
| Q8251      | 2SC2412K/QR/-X  | SI. TRANSISTOR   |             | *     |
| Q8252      | 2SA1037AK/QR/-X | SI. TRANSISTOR   |             | *     |
| Q8253-54   | 2SC2412K/QR/-X  | SI. TRANSISTOR   |             | *     |
| Q8301      | 2SC2412K/QR/-X  | SI. TRANSISTOR   |             | *     |
| Q8302      | 2SA1037AK/QR/-X | SI. TRANSISTOR   |             | *     |
| Q8303-04   | 2SC2412K/QR/-X  | SI. TRANSISTOR   |             | *     |
| Q8351-52   | 2SC2412K/QR/-X  | SI. TRANSISTOR   |             | *     |
| Q8651-54   | DTC323TK-X      | DIGI. TRANSISTOR |             | *     |

**IC**

| Symbol No. | Part No.   | Part Name      | Description | Local |
|------------|------------|----------------|-------------|-------|
| IC8001     | BA17805T   | I.C.(MONO-ANA) |             | *     |
| IC8101     | LA7583     | I.C.(MONO-ANA) |             | *     |
| IC8201     | TC9090AN   | I.C.(DIGI-MOS) |             | *     |
| IC8291     | AN78N05    | I.C.(M)        |             | *     |
| IC8292     | BA17809T   | I.C.(MONO-ANA) |             | *     |
| IC8651     | UPC1851ACU | I.C.(MONO-ANA) |             | *     |
| IC8661     | BA15218N   | I.C.(MONO-ANA) |             | *     |
| IC8801     | CXA1545AS  | I.C.(MONO-ANA) |             | *     |

**OTHERS**

| Symbol No. | Part No.      | Part Name      | Description | Local |
|------------|---------------|----------------|-------------|-------|
|            | CM36337-A01-H | SHIELD COVER   |             | *     |
|            | QRE141J-OR0Y  | C R            | 0.0Ω 1/4W J | *     |
| CF8102     | FCR5.71M2SF3  | CER. RESONATOR |             | *     |
| CF8103     | CE4150S-001   | CERAMIC FILTER |             | *     |
| J8801      | QMCC004-C01   | MINI DIN JACK  |             | *     |
| J8802      | QNN0099-001   | PIN JACK       |             | *     |
| SF8101     | QAX0324-002   | SAW FILTER     |             | *     |
| △ TU8001   | CEEM270-A02   | TUNER          |             | *     |

**FRONT AV JACK P.W. BOARD ASS'Y (SGB-8303A-M2)**

△ Symbol No. Part No. Part Name Description Local

**RESISTOR**

| Symbol No. | Part No.     | Part Name | Description | Local |
|------------|--------------|-----------|-------------|-------|
| R0101      | NRSA02J-750X | MG R      | 75Ω 1/10W J | *     |

**OTHERS**

| Symbol No. | Part No.    | Part Name | Description | Local |
|------------|-------------|-----------|-------------|-------|
| J0001      | CEMN058-001 | PIN JACK  |             | *     |

**LINE FILTER P.W. BOARD ASS'Y (SGB-9104A-M2)**

△ Symbol No. Part No. Part Name Description Local

**CAPACITOR**

| Symbol No. | Part No.    | Part Name | Description     | Local |
|------------|-------------|-----------|-----------------|-------|
| △ C9901    | QFZ9040-104 | MF CAP.   | 0.1μFAC400V M   | *     |
| △ C9902    | QFZ9040-473 | MF CAP.   | 0.047μFAC400V M | *     |
| △ C9903    | QFZ9040-104 | MF CAP.   | 0.1μFAC400V M   | *     |

**OTHERS**

| Symbol No. | Part No.       | Part Name   | Description | Local |
|------------|----------------|-------------|-------------|-------|
| △ F9901    | QMF51E2-3R15J4 | FUSE        | 3.15 A      | *     |
| FC9901-02  | CEMG002-001Z   | FUSE CLIP   |             | *     |
| △ LF9901   | CELF001-001J1  | LINE FILTER |             | *     |
| △ LF9902   | CE41890-003J1  | LINE FILTER |             | *     |
| △ VA9901   | ERZV10V621CS   | VARISTOR    |             | *     |

**PIP P.W. BOARD ASS'Y (SGB0P002A-M2)**

△ Symbol No. Part No. Part Name Description Local

**RESISTOR**

| Symbol No. | Part No.     | Part Name | Description   | Local |
|------------|--------------|-----------|---------------|-------|
| R0101      | NRSA02J-102X | MG R      | 1kΩ 1/10W J   | *     |
| R0102      | NRSA02J-222X | MG R      | 2.2kΩ 1/10W J | *     |
| R0104      | NRSA02J-OR0X | MG R      | 0.0Ω 1/10W J  | *     |
| R0105      | NRSA02J-104X | MG R      | 100kΩ 1/10W J | *     |
| R0106-07   | NRSA02J-OR0X | MG R      | 0.0Ω 1/10W J  | *     |
| R0108      | NRSA02J-223X | MG R      | 22kΩ 1/10W J  | *     |
| R0109      | NRSA02J-273X | MG R      | 27kΩ 1/10W J  | *     |
| R0110      | NRSA02J-224X | MG R      | 220kΩ 1/10W J | *     |

| Symbol No. | Part No.     | Part Name | Description   | Local |
|------------|--------------|-----------|---------------|-------|
| R0112      | NRSA02J-OR0X | MG R      | 0.0Ω 1/10W J  | *     |
| R0113-14   | NRSA02J-103X | MG R      | 10kΩ 1/10W J  | *     |
| R0115      | NRSA02J-822X | MG R      | 8.2kΩ 1/10W J | *     |
| R0117      | NRSA02J-103X | MG R      | 10kΩ 1/10W J  | *     |
| R0118      | NRSA02J-OR0X | MG R      | 0.0Ω 1/10W J  | *     |
| R0120      | NRSA02J-183X | MG R      | 18kΩ 1/10W J  | *     |
| R0121      | NRSA02J-223X | MG R      | 22kΩ 1/10W J  | *     |
| R0152-53   | NRSA02J-102X | MG R      | 1kΩ 1/10W J   | *     |

| Symbol No. | Part No.     | Part Name | Description   | Local |
|------------|--------------|-----------|---------------|-------|
| R0161      | NRSA02J-OR0X | MG R      | 0.0Ω 1/10W J  | *     |
| R0162      | NRSA02J-223X | MG R      | 22kΩ 1/10W J  | *     |
| R0163      | NRSA02J-222X | MG R      | 2.2kΩ 1/10W J | *     |
| R0164      | NRSA02J-123X | MG R      | 12kΩ 1/10W J  | *     |
| R0166-67   | NRSA02J-OR0X | MG R      | 0.0Ω 1/10W J  | *     |
| R0169      | NRSA02J-333X | MG R      | 33kΩ 1/10W J  | *     |
| R0171      | NRSA02J-152X | MG R      | 1.5kΩ 1/10W J | *     |
| R0172      | NRSA02J-OR0X | MG R      | 0.0Ω 1/10W J  | *     |

| Symbol No. | Part No.     | Part Name | Description   | Local |
|------------|--------------|-----------|---------------|-------|
| R0173      | NRSA02J-222X | MG R      | 2.2kΩ 1/10W J | *     |
| R0174      | NRSA02J-152X | MG R      | 1.5kΩ 1/10W J | *     |

| △ Symbol No.     | Part No.     | Part Name | Description   | Local |
|------------------|--------------|-----------|---------------|-------|
| <b>RESISTOR</b>  |              |           |               |       |
| R0175            | NRSA02J-681X | MG R      | 680Ω 1/10W J  | *     |
| R0176            | NRSA02J-562X | MG R      | 5.6kΩ 1/10W J | *     |
| R0177            | NRSA02J-101X | MG R      | 100Ω 1/10W J  | *     |
| R0178            | NRSA02J-682X | MG R      | 6.8kΩ 1/10W J | *     |
| R0179            | NRSA02J-101X | MG R      | 100Ω 1/10W J  | *     |
| R0180            | NRSA02J-682X | MG R      | 6.8kΩ 1/10W J | *     |
| R0181            | NRSA02J-103X | MG R      | 10kΩ 1/10W J  | *     |
| R0182            | NRSA02J-102X | MG R      | 1kΩ 1/10W J   | *     |
| R0201-02         | NRSA02J-181X | MG R      | 180Ω 1/10W J  | *     |
| R0203            | NRSA02J-080X | MG R      | 0.0Ω 1/10W J  | *     |
| R0205            | NRSA02J-122X | MG R      | 1.2kΩ 1/10W J | *     |
| R0206            | NRSA02J-101X | MG R      | 100Ω 1/10W J  | *     |
| R0207            | NRSA02J-332X | MG R      | 3.3kΩ 1/10W J | *     |
| R0208            | NRSA02J-105X | MG R      | 1MΩ 1/10W J   | *     |
| R0209            | NRSA02J-103X | MG R      | 10kΩ 1/10W J  | *     |
| R0210            | NRSA02J-471X | MG R      | 470Ω 1/10W J  | *     |
| R0211            | NRSA02J-153X | MG R      | 15kΩ 1/10W J  | *     |
| R0212            | NRSA02J-122X | MG R      | 1.2kΩ 1/10W J | *     |
| R0213            | NRSA02J-101X | MG R      | 100Ω 1/10W J  | *     |
| R0214            | NRSA02J-152X | MG R      | 1.5kΩ 1/10W J | *     |
| R0215            | NRSA02J-105X | MG R      | 1MΩ 1/10W J   | *     |
| R0216            | NRSA02J-103X | MG R      | 10kΩ 1/10W J  | *     |
| R0217-18         | NRSA02J-102X | MG R      | 1kΩ 1/10W J   | *     |
| R0220-22         | NRSA02J-152X | MG R      | 1.5kΩ 1/10W J | *     |
| R0223            | NRSA02J-101X | MG R      | 100Ω 1/10W J  | *     |
| R0224            | NRSA02J-183X | MG R      | 18kΩ 1/10W J  | *     |
| R0226            | NRSA02J-272X | MG R      | 2.7kΩ 1/10W J | *     |
| R0227-30         | NRSA02J-123X | MG R      | 12kΩ 1/10W J  | *     |
| R0231-32         | NRSA02J-222X | MG R      | 2.2kΩ 1/10W J | *     |
| R0233            | NRSA02J-183X | MG R      | 18kΩ 1/10W J  | *     |
| <b>CAPACITOR</b> |              |           |               |       |
| R0235            | NRSA02J-272X | MG R      | 2.7kΩ 1/10W J | *     |
| C0101            | NCF21HZ-103X | C CAP.    | 0.01μF 50V Z  | *     |
| C0102            | QETN1CM-1072 | E CAP.    | 100μF 16V M   | *     |
| C0103-05         | NCF21HZ-103X | C CAP.    | 0.01μF 50V Z  | *     |
| C0106            | QETN1EM-476Z | E CAP.    | 47μF 25V M    | *     |
| C0110            | QETN1HM-475Z | E CAP.    | 4.7μF 50V M   | *     |
| C0111            | NCF21HZ-103X | C CAP.    | 0.01μF 50V Z  | *     |
| C0112            | QETN1CM-1072 | E CAP.    | 100μF 16V M   | *     |
| C0113-18         | NCF21HZ-103X | C CAP.    | 0.01μF 50V Z  | *     |
| C0119            | QETN1HM-475Z | E CAP.    | 4.7μF 50V M   | *     |
| C0120            | NCB21HK-103X | C CAP.    | 0.01μF 50V K  | *     |
| C0121            | QETN1HM-225Z | E CAP.    | 2.2μF 50V M   | *     |
| C0122-24         | NCF21HZ-103X | C CAP.    | 0.01μF 50V Z  | *     |
| C0125            | QETN1HM-476Z | E CAP.    | 47μF 50V M    | *     |
| C0126            | NCF21HZ-103X | C CAP.    | 0.01μF 50V Z  | *     |
| C0127            | QETN1HM-225Z | E CAP.    | 2.2μF 50V M   | *     |
| C0128            | NDC21HJ-120X | C CAP.    | 12pF 50V J    | *     |
| C0129            | NCF21HZ-103X | C CAP.    | 0.01μF 50V Z  | *     |
| C0130            | QETN1CM-1072 | E CAP.    | 100μF 16V M   | *     |
| C0131            | NCB21HK-103X | C CAP.    | 0.01μF 50V K  | *     |
| C0132            | QETN1HM-475Z | E CAP.    | 4.7μF 50V M   | *     |
| C0133            | QFLC1HJ-104Z | M CAP.    | 0.1μF 50V J   | *     |
| C0135            | QETN1HM-105Z | E CAP.    | 1μF 50V M     | *     |
| C0136            | NCB21HK-103X | C CAP.    | 0.01μF 50V K  | *     |
| C0137            | QETN1HM-105Z | E CAP.    | 1μF 50V M     | *     |
| C0138            | QFLC1HJ-104Z | M CAP.    | 0.1μF 50V J   | *     |
| C0151            | QETN1EM-476Z | E CAP.    | 47μF 25V M    | *     |
| C0152-53         | NCF21HZ-103X | C CAP.    | 0.01μF 50V Z  | *     |
| C0154            | QETN1EM-476Z | E CAP.    | 47μF 25V M    | *     |
| C0156            | NCB21HK-473X | C CAP.    | 0.047μF 50V K | *     |
| C0161            | NDC21HJ-221X | C CAP.    | 220pF 50V J   | *     |
| C0162            | QFN31HJ-102Z | M CAP.    | 1000pF 50V J  | *     |
| C0163            | NCF21HZ-103X | C CAP.    | 0.01μF 50V Z  | *     |
| C0173            | NDC21HJ-220X | C CAP.    | 22pF 50V J    | *     |

| △ Symbol No.      | Part No.        | Part Name         | Description   | Local |
|-------------------|-----------------|-------------------|---------------|-------|
| <b>CAPACITOR</b>  |                 |                   |               |       |
| C0174             | NDC21HJ-101X    | C CAP.            | 100pF 50V J   | *     |
| C0174             | NDC21HJ-101X    | C CAP.            | 100pF 50V J   | *     |
| C0175-77          | QETN1HM-475Z    | E CAP.            | 4.7μF 50V M   | *     |
| C0201             | NCF21HZ-103X    | C CAP.            | 0.01μF 50V Z  | *     |
| C0202             | QETN1EM-476Z    | E CAP.            | 47μF 25V M    | *     |
| C0203             | NCF21HZ-103X    | C CAP.            | 0.01μF 50V Z  | *     |
| C0204-05          | QETN1HM-106Z    | E CAP.            | 10μF 50V M    | *     |
| C0206             | NCF21HZ-103X    | C CAP.            | 0.01μF 50V Z  | *     |
| C0210-11          | NCF21HZ-103X    | C CAP.            | 0.01μF 50V Z  | *     |
| C0212             | QETN1HM-225Z    | E CAP.            | 2.2μF 50V M   | *     |
| C0213             | NCB21HK-103X    | C CAP.            | 0.01μF 50V K  | *     |
| C0214             | QETN1HM-225Z    | E CAP.            | 2.2μF 50V M   | *     |
| C0215             | NCB21HK-103X    | C CAP.            | 0.01μF 50V K  | *     |
| C0216             | NCB21HK-102X    | C CAP.            | 1000pF 50V K  | *     |
| C0219             | QETN1HM-106Z    | E CAP.            | 10μF 50V M    | *     |
| C0220             | NCF21HZ-103X    | C CAP.            | 0.01μF 50V Z  | *     |
| C0221-26          | NDC21HJ-101X    | C CAP.            | 100pF 50V J   | *     |
| C0227             | QETN1EM-476Z    | E CAP.            | 47μF 25V M    | *     |
| C0228             | NCF21HZ-103X    | C CAP.            | 0.01μF 50V Z  | *     |
| C0229-30          | NDC21HJ-101X    | C CAP.            | 100pF 50V J   | *     |
| C0231-39          | NDC21HJ-471X    | C CAP.            | 470pF 50V J   | *     |
| C0241             | NCF21HZ-103X    | C CAP.            | 0.01μF 50V Z  | *     |
| C0242             | QETN1EM-476Z    | E CAP.            | 47μF 25V M    | *     |
| C0243             | NCF21HZ-103X    | C CAP.            | 0.01μF 50V Z  | *     |
| C0244-47          | NDC21HJ-470X    | C CAP.            | 47pF 50V J    | *     |
| C0248             | QETN1HM-105Z    | E CAP.            | 1μF 50V M     | *     |
| C0249             | NCF21HZ-103X    | C CAP.            | 0.01μF 50V Z  | *     |
| C0250-51          | NDC21HJ-681X    | C CAP.            | 680pF 50V J   | *     |
| C0252             | NDC21HJ-101X    | C CAP.            | 100pF 50V J   | *     |
| C0253-54          | NCF21HZ-103X    | C CAP.            | 0.01μF 50V Z  | *     |
| C0255             | QETN1EM-476Z    | E CAP.            | 47μF 25V M    | *     |
| C0256-58          | QENC1CM-106Z    | BP E CAP.         | 10μF 16V M    | *     |
| C0259             | QETN1EM-476Z    | E CAP.            | 47μF 25V M    | *     |
| C0260             | QENC1HM-475Z    | BP E CAP.         | 4.7μF 50V M   | *     |
| C0261             | QETN1EM-476Z    | E CAP.            | 47μF 25V M    | *     |
| C0262             | QENC1HM-475Z    | BP E CAP.         | 4.7μF 50V M   | *     |
| C0263-64          | QETN1HM-475Z    | E CAP.            | 4.7μF 50V M   | *     |
| C0265             | QFLC1HJ-333Z    | M CAP.            | 0.033μF 50V J | *     |
| C0266             | QENC1HM-475Z    | BP E CAP.         | 4.7μF 50V M   | *     |
| <b>COIL</b>       |                 |                   |               |       |
| L0101-05          | QQL03BJ-4R7Z    | COIL              | 4.7μH         | *     |
| L0172             | QQL03BJ-820Z    | COIL              | 82μH          | *     |
| L0173             | QQL03BJ-150Z    | COIL              | 15μH          | *     |
| <b>DIODE</b>      |                 |                   |               |       |
| D0201             | 1SS133-T2       | SI. DIODE         |               | *     |
| <b>TRANSISTOR</b> |                 |                   |               |       |
| Q0151             | 2SC2412K/QR/-X  | SI. TRANSISTOR    |               | *     |
| Q0161             | 2SC2412K/QR/-X  | SI. TRANSISTOR    |               | *     |
| Q0172             | 2SC2412K/QR/-X  | SI. TRANSISTOR    |               | *     |
| Q0173-75          | 2SA1037AK/QR/-X | SI. TRANSISTOR    |               | *     |
| Q0202-06          | 2SC2412K/QR/-X  | SI. TRANSISTOR    |               | *     |
| <b>IC</b>         |                 |                   |               |       |
| IC0101            | TB1230N         | I.C. (DIGI-OTHER) |               | *     |
| IC0102            | TC4538BP/N/     | I C               |               | *     |
| IC0151            | BA17805T        | I.C. (MONO-ANA)   |               | *     |
| IC0152            | BA17809T        | I.C. (MONO-ANA)   |               | *     |
| IC0201            | LC74411N        | I.C. (DIGI-MOS)   |               | *     |
| IC0202            | MN1381/Q/-T     | I.C. (MONO-ANA)   |               | *     |
| IC0203-04         | BA7655AF-X      | I.C. (MONO-ANA)   |               | *     |



**SIDE PIN P.W. BOARD ASS'Y (SGB-8404A-M2)**

| △ Symbol No.  | Part No.     | Part Name  | Description  | Local |
|---------------|--------------|------------|--------------|-------|
| <b>OTHERS</b> |              |            |              |       |
| CN0003        | QGB1505K1-35 | PLUG       |              | *     |
| K0201         | CE42136-A01Y | BEADS CORE |              | *     |
| W0019         | NRSA02J-OROX | MG R       | 0.0Ω 1/10W J | *     |
| W0022-24      | NRSA02J-OROX | MG R       | 0.0Ω 1/10W J | *     |
| W0026         | NRSA02J-OROX | MG R       | 0.0Ω 1/10W J | *     |
| W0028         | NRSA02J-OROX | MG R       | 0.0Ω 1/10W J | *     |
| W0032         | NRSA02J-OROX | MG R       | 0.0Ω 1/10W J | *     |
| W0035-36      | NRSA02J-OROX | MG R       | 0.0Ω 1/10W J | *     |
| W0043-44      | NRSA02J-OROX | MG R       | 0.0Ω 1/10W J | *     |
| W0046         | NRSA02J-OROX | MG R       | 0.0Ω 1/10W J | *     |
| W0051-55      | NRSA02J-OROX | MG R       | 0.0Ω 1/10W J | *     |
| W0063-65      | NRSA02J-OROX | MG R       | 0.0Ω 1/10W J | *     |
| W0067-72      | NRSA02J-OROX | MG R       | 0.0Ω 1/10W J | *     |
| W0074         | NRSA02J-OROX | MG R       | 0.0Ω 1/10W J | *     |
| W0077-82      | NRSA02J-OROX | MG R       | 0.0Ω 1/10W J | *     |
| W0084         | NRSA02J-OROX | MG R       | 0.0Ω 1/10W J | *     |
| W0086         | NRSA02J-OROX | MG R       | 0.0Ω 1/10W J | *     |
| W0089-90      | NRSA02J-OROX | MG R       | 0.0Ω 1/10W J | *     |
| W0094-95      | NRSA02J-OROX | MG R       | 0.0Ω 1/10W J | *     |
| X0101         | QAX0305-001Z | CRYSTAL    |              | *     |
| Y0102         | NRSA02J-OROX | MG R       | 0.0Ω 1/10W J | *     |
| Y0104         | NRSA02J-OROX | MG R       | 0.0Ω 1/10W J | *     |
| Y0201         | NRSA02J-OROX | MG R       | 0.0Ω 1/10W J | *     |

| △ Symbol No.    | Part No.      | Part Name | Description   | Local |
|-----------------|---------------|-----------|---------------|-------|
| <b>RESISTOR</b> |               |           |               |       |
| R8461           | NRSA02J-102X  | MG R      | 1kΩ 1/10W J   | *     |
| R8462           | NRSA02J-562X  | MG R      | 5.6kΩ 1/10W J | *     |
| R8463-64        | NRSA02J-221X  | MG R      | 220Ω 1/10W J  | *     |
| R8465           | NRSA02J-331X  | MG R      | 330Ω 1/10W J  | *     |
| △ R8466         | QRJ146J-2R2X  | C R       | 2.2Ω 1/4W J   | *     |
| R8467           | NRSA02J-333X  | MG R      | 33kΩ 1/10W J  | *     |
| R8468           | NRSA02J-102X  | MG R      | 1kΩ 1/10W J   | *     |
| R8469           | NRSA02J-222X  | MG R      | 2.2kΩ 1/10W J | *     |
| R8470           | NRSA02J-472X  | MG R      | 4.7kΩ 1/10W J | *     |
| R8471           | NRSA02J-102X  | MG R      | 1kΩ 1/10W J   | *     |
| R8472-73        | NRSA02J-333X  | MG R      | 33kΩ 1/10W J  | *     |
| R8474           | QRA14CF-2491Y | MF R      | 2.49kΩ 1/4W F | *     |
| R8475           | NRSA02J-OROX  | MG R      | 0.0Ω 1/10W J  | *     |
| R8477           | NRSA02J-OROX  | MG R      | 0.0Ω 1/10W J  | *     |
| R8478           | NRSA02J-221X  | MG R      | 220Ω 1/10W J  | *     |

**CAPACITOR**

|       |              |         |               |   |
|-------|--------------|---------|---------------|---|
| C8451 | NDC21HJ-680X | C CAP.  | 68pF 50V J    | * |
| C8452 | NDC21HJ-121X | C CAP.  | 120pF 50V J   | * |
| C8462 | QFP31HG-333  | PP CAP. | 0.033μF 50V G | * |
| C8463 | QEM61EK-225Z | E CAP.  | 2.2μF 25V K   | * |
| C8464 | QFV71HJ-184Z | MF CAP. | 0.18μF 50V J  | * |
| C8465 | QFLC1HJ-823Z | M CAP.  | 0.082μF 50V J | * |
| C8466 | QETN1CM-108Z | E CAP.  | 1000μF 16V M  | * |
| C8467 | QFLC1HJ-104Z | M CAP.  | 0.1μF 50V J   | * |

**DIODE**

|       |             |             |  |   |
|-------|-------------|-------------|--|---|
| D8461 | MTZJ3.9B-T2 | ZENER DIODE |  | * |
| D8462 | MTZJ12C-T2  | ZENER DIODE |  | * |

**TRANSISTOR**

|          |                |               |  |   |
|----------|----------------|---------------|--|---|
| Q8461    | 2SC2412K/QR/-X | SI TRANSISTOR |  | * |
| Q8463-64 | 2SC2412K/QR/-X | SI TRANSISTOR |  | * |

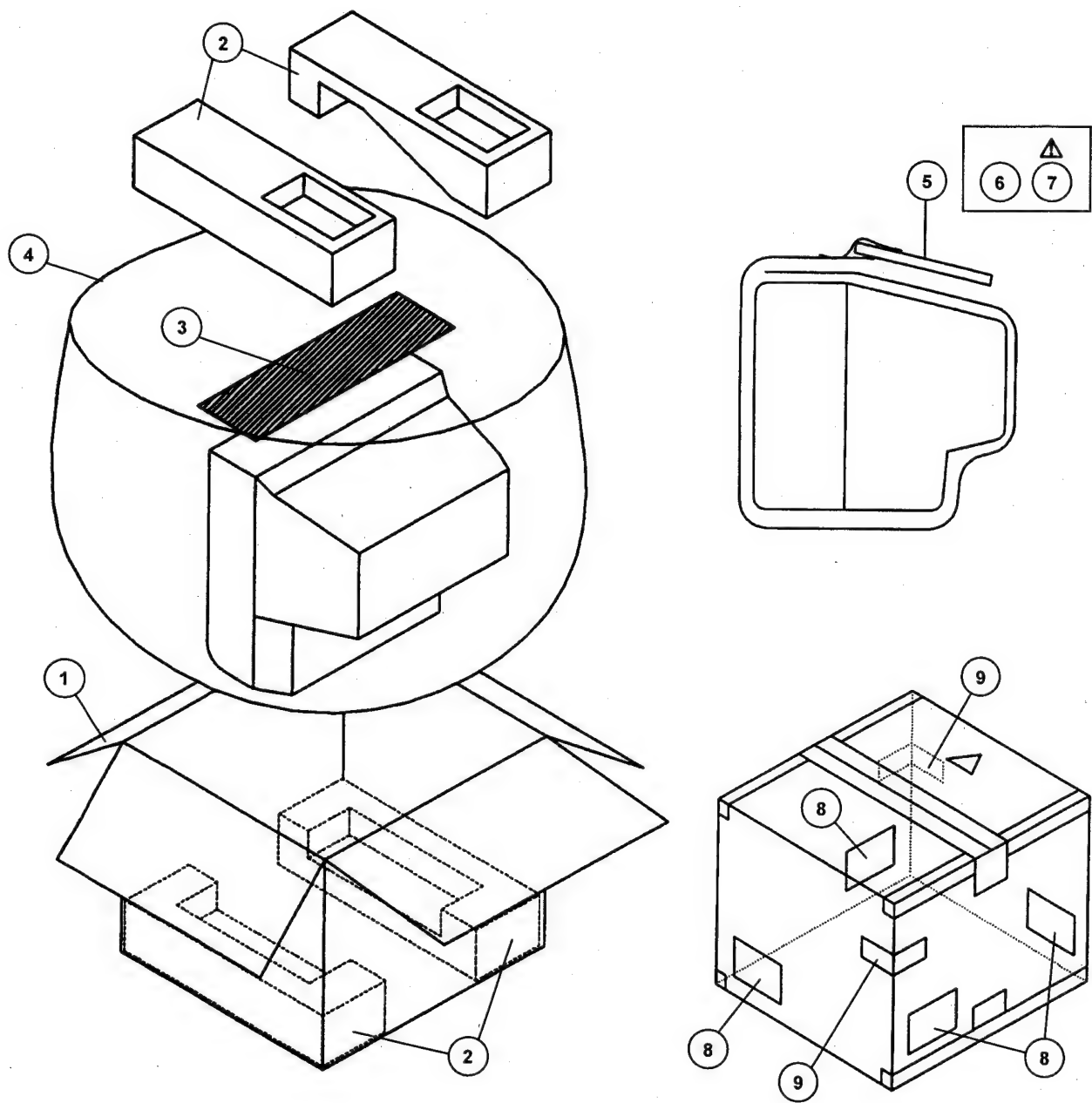
**IC**

|        |          |                 |  |  |
|--------|----------|-----------------|--|--|
| IC8461 | TA8859CP | I.C. (MONO-ANA) |  |  |
|--------|----------|-----------------|--|--|

**OTHERS**

|        |              |         |              |   |
|--------|--------------|---------|--------------|---|
| CN8004 | QGB2501K2-10 | JL PLUG |              | * |
| W8001  | NRSA02J-OROX | MG R    | 0.0Ω 1/10W J | * |
| Y8001  | NRSA02J-OROX | MG R    | 0.0Ω 1/10W J | * |

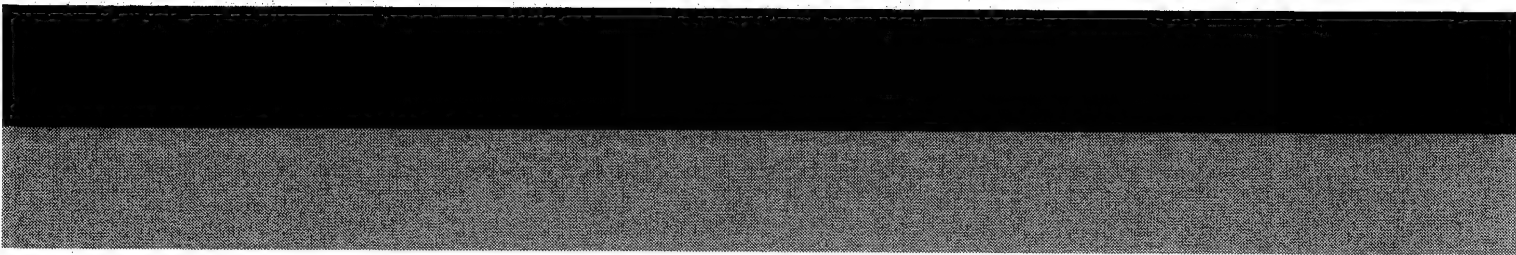
PACKING



PACKING PARTS LIST

| △ Ref.No. | Part No.       | Part Name       | Description  | Local |
|-----------|----------------|-----------------|--------------|-------|
| 1         | CP11499-034-A  | PACKING CASE    |              | *     |
| 2         | CP11387-00D-A  | PACKING CUSHION | 4pcs in 1set | *     |
| 3         | CP30055-A02-A  | TOP COVER       |              | *     |
| 4         | CP30056-004-A  | POLY BAG        |              | *     |
| 5         | QPA02503505    | POLY BAG        |              | *     |
| 6         | RM-C735-1A     | REMOCON UNIT    |              | *     |
| △ 7       | LCT0646-001A-A | INST BOOK       |              | *     |
| 8         | CM36654-004-A  | INCH SIZE LABEL | 4pcs in 1set | *     |
| 9         | CM36616-001-A  | CORNER LABEL    | 2pcs in 1set | *     |





# JVC

VICTOR COMPANY OF JAPAN, LIMITED  
TELEVISION RECEIVER DIVISION 1106 Heta, Iwai-city, Ibaraki-prefecture, 306-0698, Japan

AVT3885(BRM) #9999



Printed in Japan  
VP 9910  
DP 3052

# AV-T3885<sub>(BR)</sub> STANDARD CIRCUIT DIAGRAM

## ■ NOTE ON USING CIRCUIT DIAGRAMS

### 1. SAFETY

The components identified by the  $\Delta$  symbol and shading are critical for safety. For continued safety replace safety critical components only with manufactures recommended parts.

### 2. SPECIFIED VOLTAGE AND WAVEFORM VALUES

The voltage and waveform values have been measured under the following conditions.

- |   |  |
|---|--|
| (1) Input signal  | : PAL Colour bar signal  |
| (2) Setting positions of each knob/button and variable resistor | : Original setting position when shipped   |
| (3) Internal resistance of tester                               | : DC 20k $\Omega$ /V   |
| (4) Oscilloscope sweeping time                                  | : H $\Rightarrow$ 20 $\mu$ S/div<br>: V $\Rightarrow$ 5mS/div<br>: Others $\Rightarrow$ Sweeping time is specified |
| (5) Voltage values  | : All DC voltage values  |
- \* Since the voltage values of signal circuit vary to some extent according to adjustments, use them as reference values.

### 3. INDICATION OF PARTS SYMBOL [EXAMPLE]

- In the PW board : R1209—R209

### 4. INDICATIONS ON THE CIRCUIT DIAGRAM

#### (1) Resistors

##### ● Resistance value

- |         |                 |
|---------|-----------------|
| No unit | : [ $\Omega$ ]  |
| K       | : [K $\Omega$ ] |
| M       | : [M $\Omega$ ] |

##### ● Rated allowable power

- |               |                |
|---------------|----------------|
| No indication | : 1/10[W]      |
| Others        | : As specified |

##### ● Type

- |               |                             |
|---------------|-----------------------------|
| No indication | : Carbon resistor           |
| OMR           | : Oxide metal film resistor |
| MFR           | : Metal film resistor       |
| MPR           | : Metal plate resistor      |
| UNFR          | : Uninflammable resistor    |
| FR            | : Fusible resistor          |

\* Composition resistor 1/2 [W] is specified as 1/2S or Comp.

#### (2) Capacitors

##### ● Capacitance value

- |             |              |
|-------------|--------------|
| 1 or higher | : [pF]       |
| less than 1 | : [ $\mu$ F] |

##### ● Withstand voltage

- |               |                            |
|---------------|----------------------------|
| No indication | : DC50[V]                  |
| AC indicated  | : AC withstand voltage [V] |
| Others        | : DC withstand voltage [V] |

##### \* Electrolytic Capacitors

47/50[Example]: Capacitance value [ $\mu$ F]/withstand voltage[V]

##### ● Type

- |               |                                     |
|---------------|-------------------------------------|
| No indication | : Ceramic capacitor                 |
| MY            | : Mylar capacitor                   |
| MM            | : Metalized mylar capacitor         |
| PP            | : Polypropylene capacitor           |
| MPP           | : Metalized polypropylene capacitor |
| MF            | : Metalized film capacitor          |
| TF            | : Thin film capacitor               |
| BP            | : Bipolar electrolytic capacitor    |
| TAN           | : Tantalum capacitor                |

##### (3) Coils

- |         |                |
|---------|----------------|
| No unit | : [ $\mu$ H]   |
| Others  | : As specified |

##### (4) Power Supply

- |  |           |
|--|-----------|
|  | : B1      |
|  | : B2(12V) |
|  | : 9V      |
|  | : 5V      |

\* Respective voltage values are indicated

##### (5) Test point

- |  |                           |
|--|---------------------------|
|  | : Test point              |
|  | : Only test point display |

##### (6) Connecting method

- |  |                         |
|--|-------------------------|
|  | : Connector             |
|  | : Wrapping or soldering |
|  | : Receptacle            |

##### (7) Ground symbol

- |  |                                 |
|--|---------------------------------|
|  | : LIVE side ground              |
|  | : ISOLATED(NEUTRAL) side ground |
|  | : EARTH ground                  |
|  | : DIGITAL ground                |

## 5. NOTE FOR REPAIRING SERVICE

This model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : ( $\perp$ ) side GND and the ISOLATED(NEUTRAL) : ( $\perp$ ) side GND. Therefore, care must be taken for the following points.

- (1) Do not touch the LIVE side GND or the LIVE side GND and the ISOLATED(NEUTRAL) side GND simultaneously. If the above caution is not respected, an electric shock may be caused. Therefore, make sure that the power cord is surely removed from the receptacle when, for example, the chassis is pulled out.
- (2) Do not short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or never measure with a measuring apparatus ( oscilloscope, etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND at the same time. If the above precaution is not respected , a fuse or any parts will be broken.

◇ Since the circuit diagram is a standard one, the circuit and circuit constants may be subject to change for improvement without any notice.

# CONTENTS

SEMICONDUCTOR SHAPES

BLOCK DIAGRAM

CIRCUIT DIAGRAMS AND PATTERN DIAGRAMSM

MAIN PWB AND FRONT CONTROL PWB CIRCUIT DIAGRAMS

MAIN PWB, LINE FILTER PWB AND SIDE PIN PWB CIRCUIT DIAGRAMS

AV SELECTOR PWB AND FRONT AV JACK PWB CIRCUIT DIAGRAMS

PIP PWB CIRCUIT DIAGRAM

CRT SOCKET PWB CIRCUIT DIAGRAM

MAIN PWB PATTERN

FRONT CONTROL PWB PATTERN

LINE FILTER PWB PATTERN

AV SELECTOR PWB PATTERN

PIP PWB PATTERN

FRONT AV JACK PWB PATTERN

SIDE PIN PWB PATTERN

CRT SOCKET PWB PATTERN

2-2

2-3

2-5

2-7

2-9

2-11

2-13

2-15

2-17

2-18

2-19

2-20

2-21

2-21

2-22

## SEMICONDUCTOR SHAPES

### TRANSISTOR

| BOTTOM VIEW | FRONT VIEW |  |  | TOP VIEW    |
|-------------|------------|--|--|-------------|
|             |            |  |  | CHIP TR<br> |

### IC

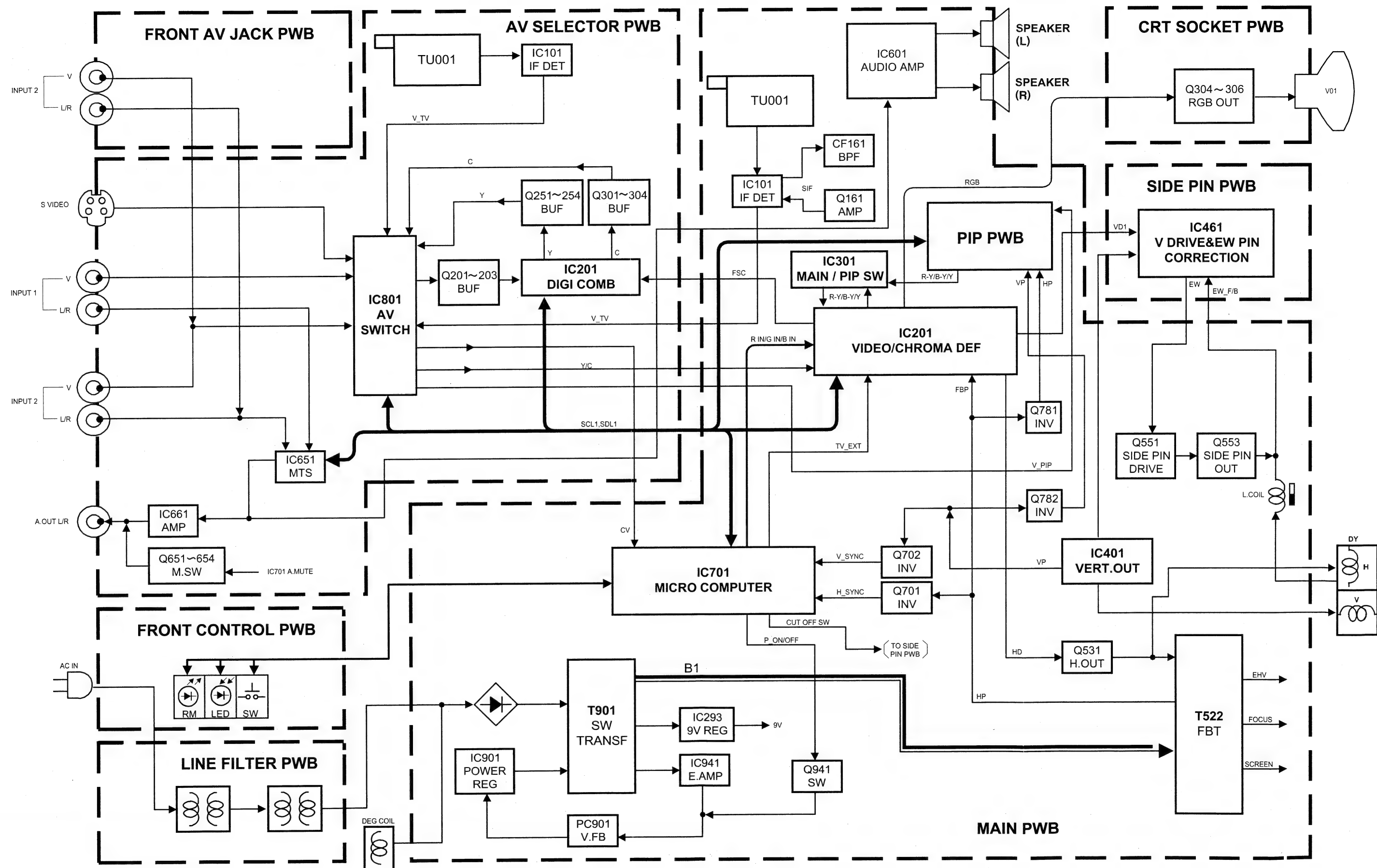
| BOTTOM VIEW | FRONT VIEW |  |  | TOP VIEW |
|-------------|------------|--|--|----------|
|             |            |  |  |          |

### CHIP IC

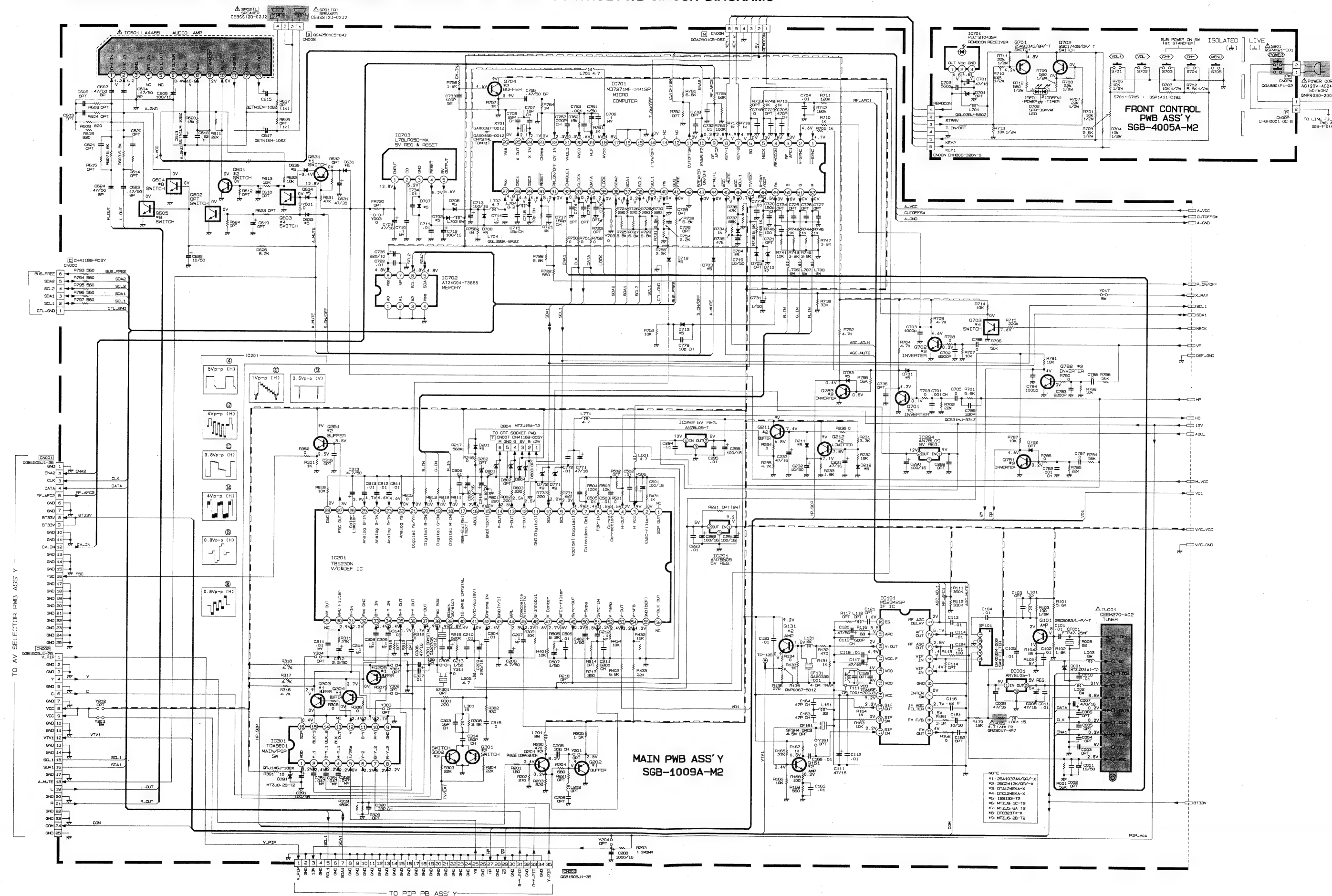
| TOP VIEW |  |  |
|----------|--|--|
|          |  |  |



## BLOCK DIAGRAM

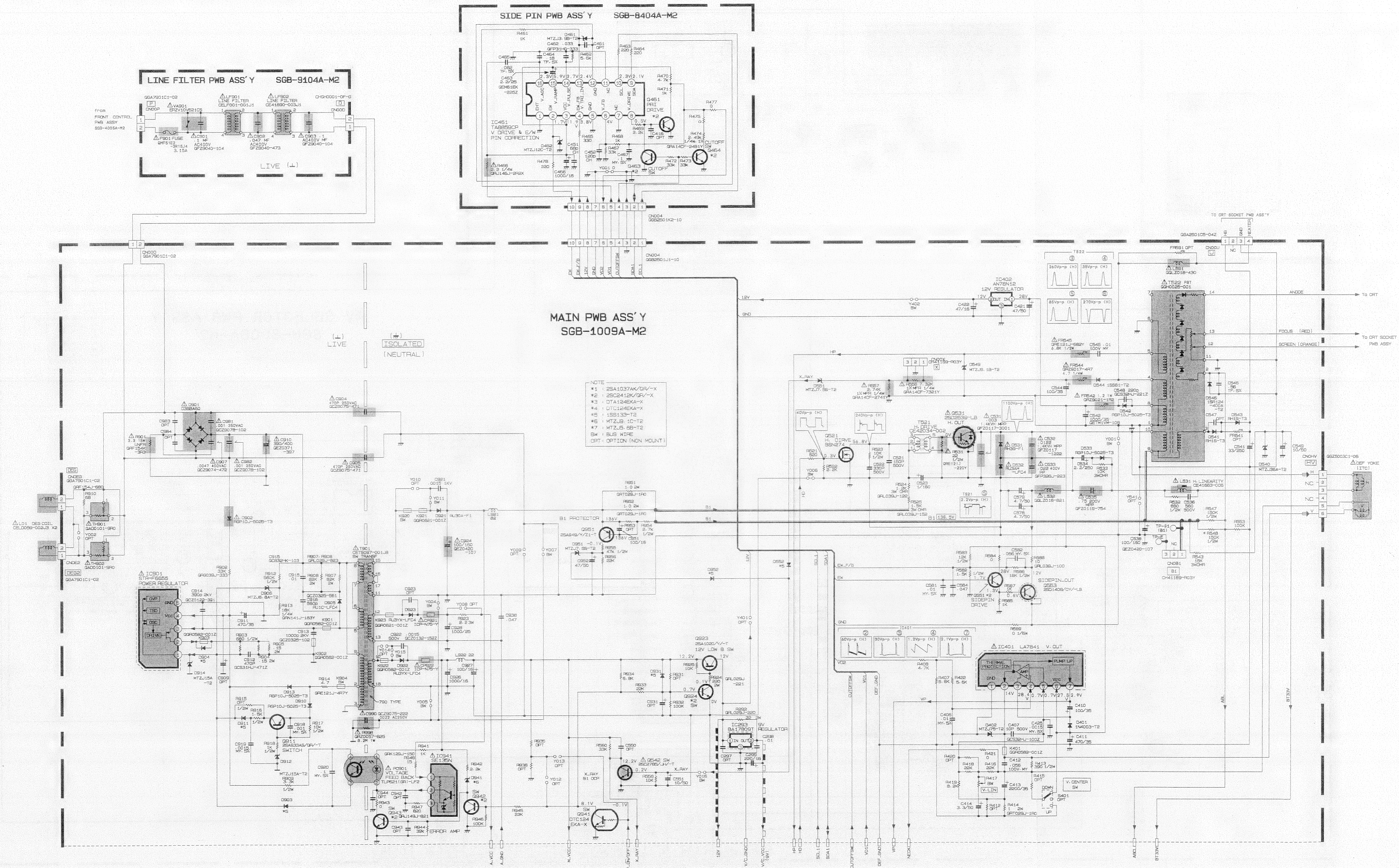


## CIRCUIT DIAGRAMS AND PATTERN DIAGRAMS *MAIN PWB AND FRONT CONTROL PWB CIRCUIT DIAGRAMS*





## MAIN PWB, LINE FILTER PWB AND SIDE PIN PWB CIRCUIT DIAGRAMS







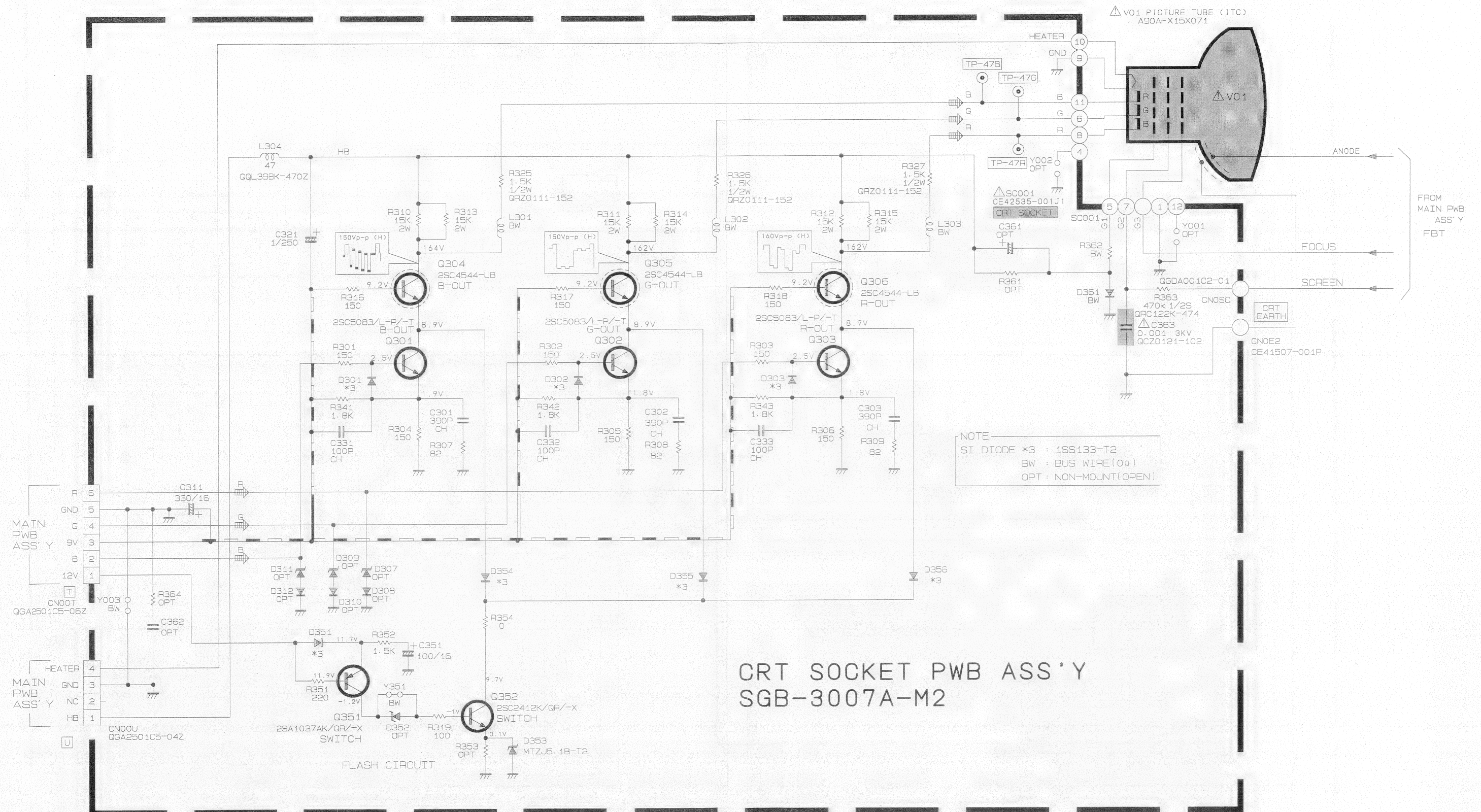


NOTE

- \*1 : CHIP PNP Tr 2SA1037AK/QR/-X BW : BUS WIRE
- \*2 : CHIP NPN Tr 2SC2412K/QR/-X X : NON-MOUNT (OPEN)
- \*3 : CHIP PNP D-Tr DTA124EKA-X Δ : SAFETY PARTS
- \*4 : CHIP NPN D-Tr DTC124EKA-X
- \*5 : SI DIODE 1SS133-T2
- \*6 : ZENER DIODE MTZJ9.1C-T2

PIP PWB ASS'Y  
SGB0P002A-M2

## CRT SOCKET PWB CIRCUIT DIAGRAM

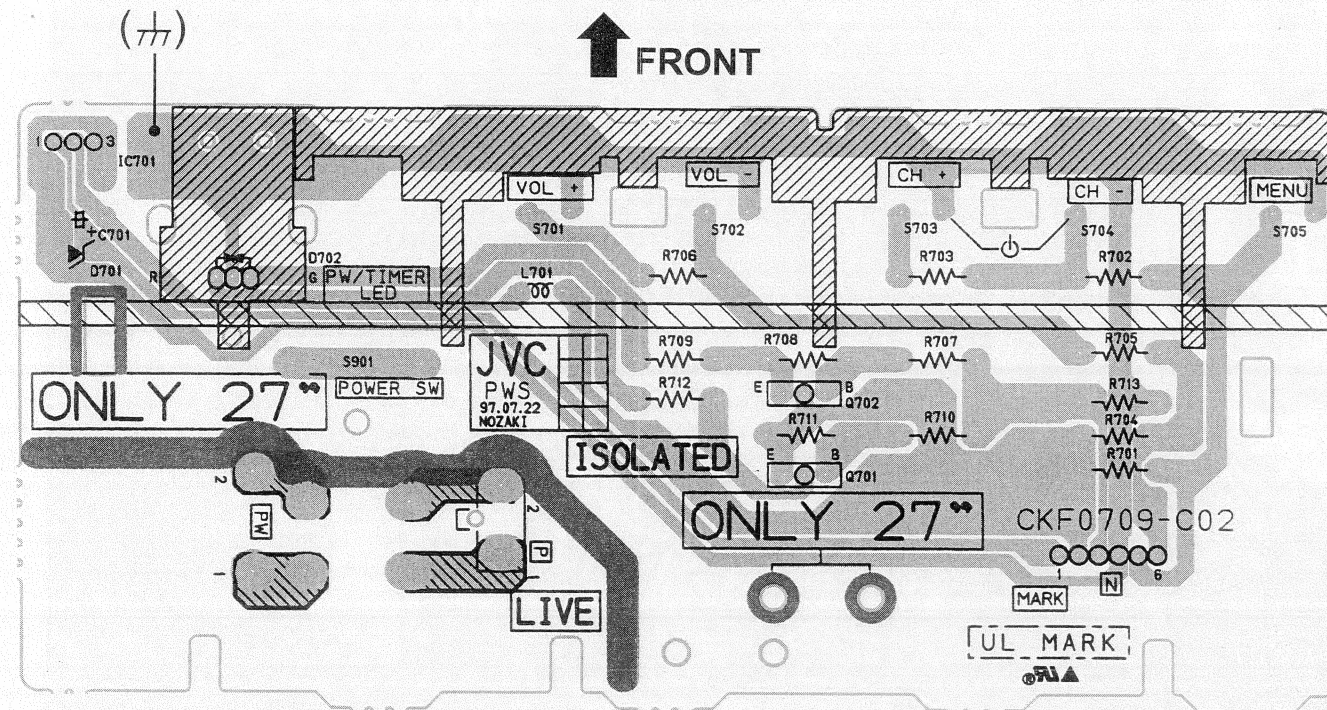




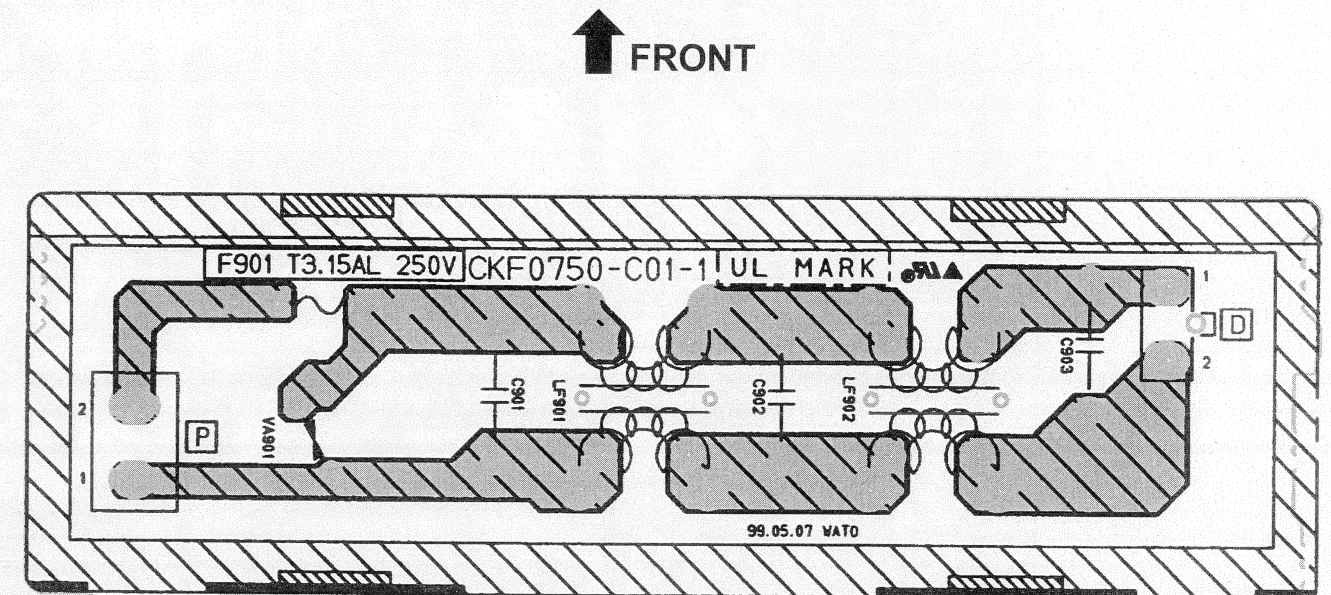




## FRONT CONTROL PWB PATTERN

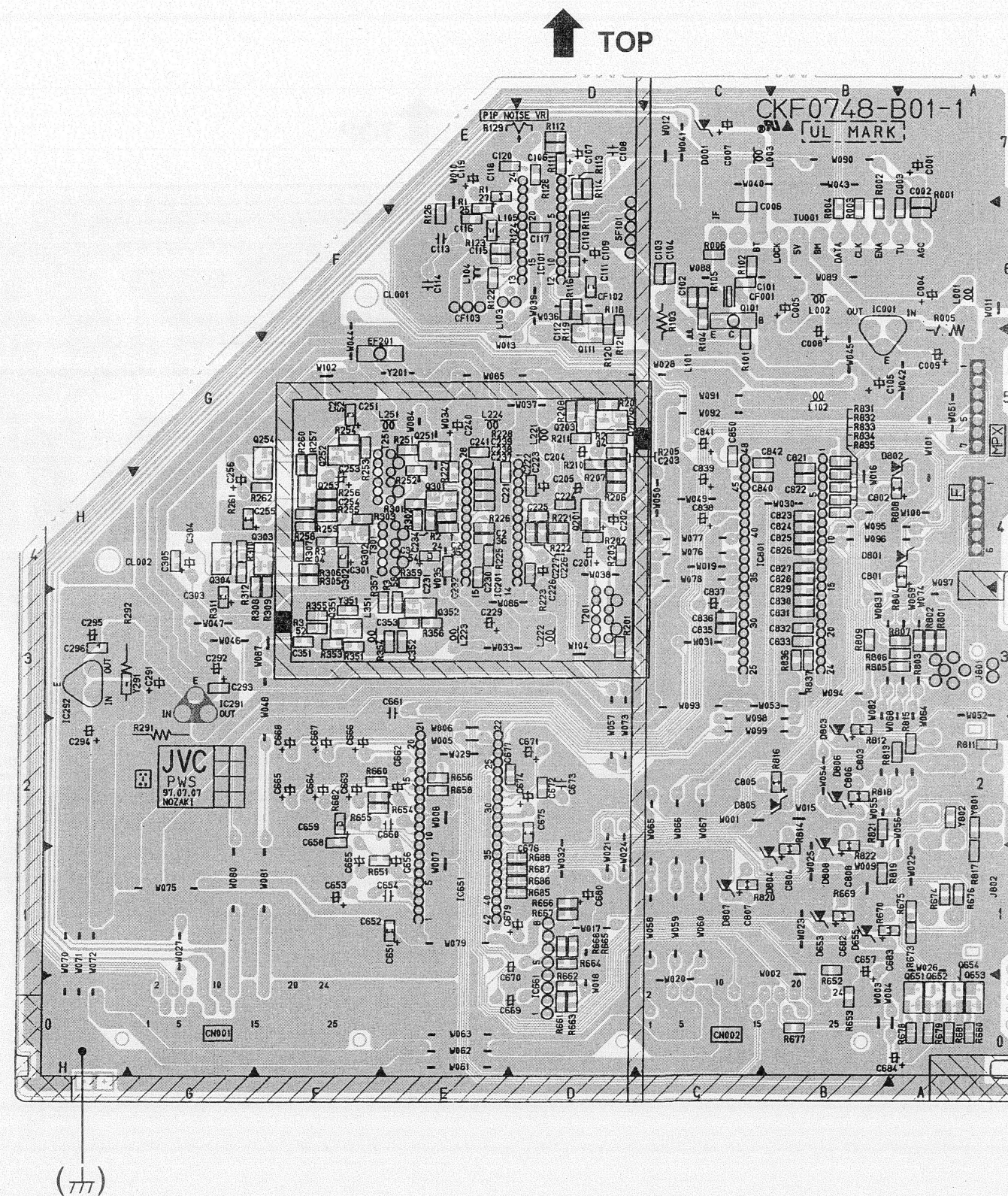


## LINE FILTER PWB PATTERN

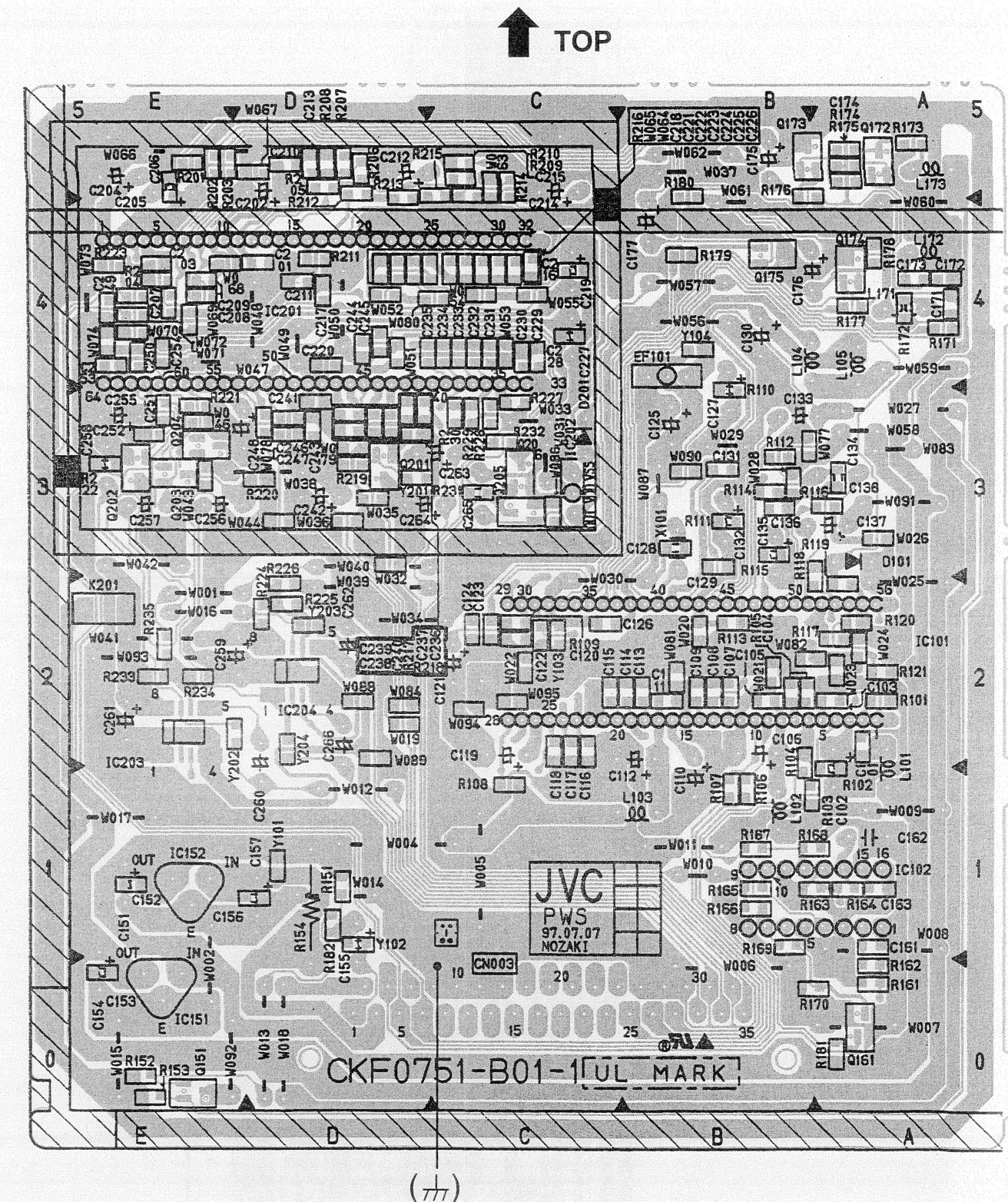




## AV SELECTOR PWB PATTERN

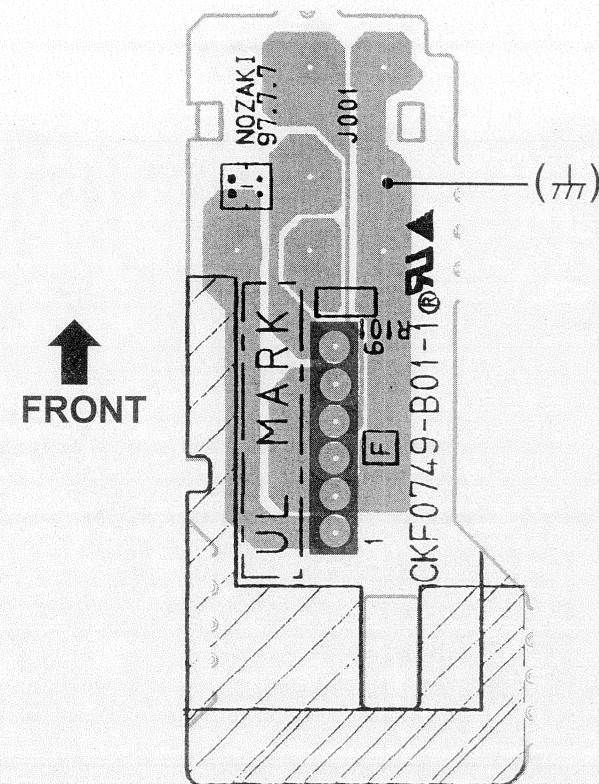


## PIP PWB PATTERN

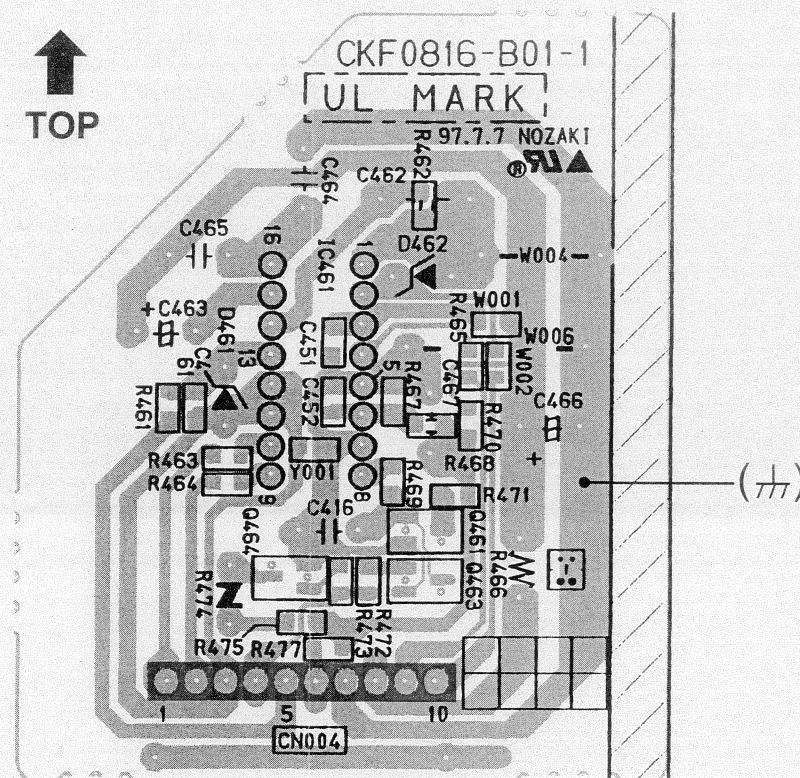




FRONT AV JACK PWB PATTERN



SIDE PIN PWB PATTERN



CRT SOCKET PWB PATTERN

